STANDARD SEVEN

TERM - III

VOLUME - 3

HISTORY

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Assessment

Unit -1

New Religious Ideas and Movements

Learning Objectives

To acquire the knowledge of

- Devotional movement of Azhwars and Nayanmars
- *Advaita* philosophy of Adi Shankara and *vishistadvaita* of Ramanuja
- Bhakti cult in Northern India and its prominent exponents
- Interaction between Hinduism and Islam, leading to the birth of new cults notably Sufism
- Teachings of Kabir and Guru Nanak
- Impact of Bhakti Movement

Introduction

Medieval India saw an extraordinary production of devotional poetry, which were not restricted to one particular religion but inspired by different religious movements. The exponents of these movements held the view that total devotion (*bhakti*) to God could save man from the pitfalls of life and earn him salvation. It was also believed that one does not have to go to temples or perform rituals, for God is omnipresent and resides inside every human. The *Bhagavad Gita* proposed that the path of *bhaktimarga* (the path of *bhakti*) is superior to the two other religious approaches, namely, the path of knowledge (*jnana*) and the path of rituals and good works (*karma*), providing inspiration to the exponents of Bhakti cult.

Bhakti Movement: The Beginnings

The Bhakti movement, or the resurgence of devotional practices, started in Tamil Nadu around seventh century AD (CE). It included reciting the name of the God or Goddess, singing hymns in their praise, wearing religious marks or carrying identity emblems, and undertaking pilgrimages to sacred places associated with the deity. It emphasised the mutual emotional attachment and love of a devotee towards a personal God and of the God for the devotee

This view was also preached by Sufism, which appeared as a reaction against worldliness of the early Islam. Sufis believed that realisation of God can be achieved only through passionate devotion to God and intense meditation. Sufis were of the view that this type of meditation would enable the devotee to understand the true nature of God. They argued that doing so would liberate the devotee from all worldly bonds and help them become one with God. Several mystical religious movements, in both Hinduism and Islam, had no hesitation to freely include elements of different faiths in their teachings. 'There is only one god, though Hindus and Muslims call him by different names', stated Haridasa.

1. Devotional Movement in Tamizhakam (Azhwars and Nayanmars)

The Azhwars, the Vaishnavite Bhakti sages and the originators of Bhakti cult, and the Nayanmars, the worshipers of Siva or the Saivites, composed devotional hymns in Tamil language, dedicated to their respective gods. Siva-bhakti is associated with Siva's manifestations on earth. Poems to Siva and Vishnu, particularly to Krishna, were composed in Tamil and other South Indian languages such as Kannada and Telugu. These poet-saints criticised caste-based social status and advocated gender equality in order to make it good to stand the onslaught of Buddhism or Jainism.

Vishnu-*bhakti* or Vaishnavism is based on Vishnu's avatars (incarnations), particularly Krishna and Rama. The 12 Tamil Azhwars are chiefly known for their immortal hymns. Two Azhwars stand out distinctly for their contribution to the promotion of the Bhakti movement. Nammazhwar's fame lies in his 1,102-stanza *Tiruvaimozhi.* Nathamuni collected the 4,000 poems of Nammazhwar, in the form of *Divya Prabandham.* Andal, the only female Azhwar, is another. Periyazhwar, who was earlier known as Vishnu Chittar, made lots of songs on Krishna putting himself in the place of mother Yashoda. Periyazhvar is said to have found Andal as a baby in the tulsi garden at Srivilliputhur temple and adopted her. She grew up in the temple town of Srivilliputhur and became known as Andal-she who ruled. *The Thiruppavai* (The Path to Krishna) and the *Nachiyar Thirumozhi* (The Sacred Songs of the Lady) are her celebrated works. Her poems expressing her love for Ranganatha, the incarnation of Vishnu worshiped at a temple at Srirangam, are used in Vaishnava wedding ceremonies in Tamil Nadu.

Vaishnavite Saints (12 Azhwars)

Three Muthal Azhwars: Poigai Azhwar, Bhoothathu Azhwar and Pei Azhwar.
Other Azhwars: Thirumalisai Azhwar, Periyazhwar, Thondaradippodi Azhwar, Thirumangai Azhwar, Thiruppanazhwar, Kulasekara Azhwar, Nammazhwar, Mathurakavi Azhwar and Andal.

Saivite Saints (63 Nayanmars)

There are 63 legendary Nayanmars. Among them, Gnanasampandar, Appar, and Sundarar (often called "the trio") are worshipped as saints through their images in South Indian temples. Nambi Andar Nambi 1000 AD (CE). is said to have compiled the songs of all of the Nayanmars that form the basis of *Tirumurai*, the basic Tamil Saivite sacred canon. It consists of 12 books, and 11 of them were assembled by Nambi. The 12th book is Sekkizhar's *Periyapuranam*.

(a) Adi Shankara

Adi Shankara

Adi Shankara or Shankarachariar 700–750 AD (CE) preached the *Advaita* philosophy. The essence of this philosophy is that the soul (*atma*) unites with the universal soul (*brahma*) through the attainment of knowledge. He set up *mathas* (*mutts*), centres of learning and worship, at Badrinath, Puri, Dwarka and Sringeri. These places have become prominent pilgrim centres today. Shankara enthusiastically endeavoured to restore the orthodox Vedic tradition without paying attention to the Bhakti movement of his time. His masterpiece is the commentary on the *Brahma-sutra*, which is a fundamental text of the Vedanta school. His commentaries on the principal Upanishads are also considered equally important.

(b) Ramanuja

Ramanuja

Ramanuja, a 11th century Vaishnava saint, was the most influential thinker of Vaishnavism. His philosophy, known as *vishistadvaita*, proclaims that the soul retains its identity even after uniting with *brahma*. After a long pilgrimage, Ramanuja settled in Srirangam. Ramanuja articulated ideas of social equality and condemned caste-based restrictions on entering the temples. He established centres to spread his doctrine of devotion, *Srivaishnavism,* to God Vishnu and his consort Lakshmi.

In the 16th and 17th centuries, Vaishnavism spread across India. The Vadakalai Vaishnavism originally flourished around Kanchipuram, which was a popular

education centre. Thenkalai Vaishnavism centred on Srirangam. Vadakalai sect focused on Vedic literature, which is written in Sanskrit. The Thenkalai sect stressed the importance of *Divya Prabandhams,* written by the 12 Azhwars in Tamil.

2. Bhakti Movement in North India

While dealing with the religious movements of the fourteenth and fifteenth centuries in northern India, one has to keep in mind the two very different attitudes which Hindu religious leaders had towards Islam. One group accepted what was best in Islam; the other adopted a few elements in order to prevent conversion to Islam. Both reacted to Islam, but one was sympathetic while the other was hostile. Kabir and Guru Nanak, and other founders of new sects are included in the first group, while the movement in Bengal, associated with Chaitanya deva, or Chaitanya Mahaprabu, belongs to the latter tendency.

(a) Exponents of Bhakti Movement

It was Ramananda who spread the Bhakti ideology in northern India where it became a mass movement. Vallabhacharya, a Telugu philosopher, built a temple for Lord Krishna on the Govardhan Hills near Mathura. Surdas, a blind poet and musician, was associated with this temple as well as that of Agra. His famous collection of poetry is called *Sursagar.* Meera Bai, wife of the crown prince of Mewar, was an ardent devotee of Lord Krishna. She was a disciple of Ravidas. Meera Bai gained popularity through her *bhajans.* Chaitanyadeva popularised Krishna worship through ecstatic songs and dancing that had a profound effect on Vaishnavism in Bengal. In the 16th century, in Tulsidas's Hindi retelling of the story of Rama in the *Ramcharitmanas,* the sentiment of friendship and loyalty is stressed. Many of those poems continue to be recited and sung often at all-night celebrations.

Ramananda

Vallabhacharya

Surdas

Meera Bai

Chaitanya

Tulsidas

Tukaram

Panduranga Temple, Pandaripuram

Tukaram, a 17th century saint poet of Maharashtra, is known for his spiritual songs (*abangas* or *kirtanas*), devoted to Vitthoba, an avatar of Krishna. There is a Vitthoba/Panduranga temple at Pantharpur or Pandaripuram in Sholapur district, Maharashtra. What is Chaitanyadeva to Bengal is Tukaram to Maharashtra.

3. Sufism in India

The advent of Sufis to India dates back to the Arab conquest of Sind. It gained prominence in the 10th and 11th centuries during the reign of the Delhi Sultans. Sufism adopted many native Indian concepts such as yogic postures, music and dance. Sufism found adherents among both Muslims and Hindus.

Sufism: The word Sufi takes its origin from *suf,* meaning wool. The Sufis wore course garments made of wool and hence they were called Sufis. Sufism was basically Islamic but was influenced by Hindu and Buddhist (Mahayana) ideas. It rejected the stringent conduct code of the *ulemas.* Sufis lived in hermitages akin to monasteries and functioned outside society.

Sufis in medieval India were divided into three major orders. They were Chisti, Suhrawardi and Firdausi. Moinuddin Chishti made Chisti order popular in India. He died in Ajmer (1236) and his resting place is in the Ajmer Sharif Dargah in Ajmer, Rajasthan. The best known Sufi sage of the early medieval period was Nizamuddin Auliya of the Chishti order, who had a large number of followers among the ruling class in Delhi. Poet Amir Khusru was one of its distinguished followers. Suhrawardi order was founded by an Iranian Sufi Abdul-Wahid Abu Najib. The Firdausi order was a branch of Suhrawardi order and its activities were confined to Bihar.

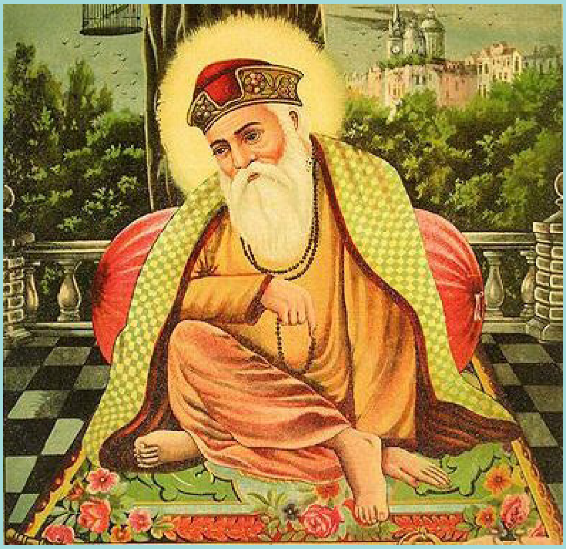
4. (a) Kabir

Kabir

Kabir, came under the influence of Varanasi-based Saint Ramananda. He accepted some Hindu ideas and tried to reconcile Hinduism and Islam. However, it was the Hindus, and particularly those of the lower classes, to whom his message appealed. Kabir believed that God is one and formless, even though different religious sects give him different names and forms. He opposed discrimination on the basis of religion, caste and wealth. He also condemned meaningless rituals. Kabir's verses were composed in Bhojpuri language mixed with Urdu. The Kabir's *Granthavali* and the *Bijak* contain collections of Kabir's verses.

(b) Guru Nanak

Early Life: Guru Nanak, born in a village near Lahore in 1469, showed interest in religious discussions with other saints right from his early childhood. His parents were keen to involve him in worldly life. But he was inclined towards spiritualism. He visited many holy places and finally settled in Kartarpur near Lahore. He died there in 1539. To mark the 550th birth anniversary of Guru Nanak, a corridor constructed by the Indian government that links the Nanak shrine in Gurdaspur with Gurudwara Darbar Sahib at Kartarpur in Pakistan.



Guru Nanak

Gurudwara Granth Sahib, Kartarpur

Guru Nanak's Teachings: Guru Nanak preached that God is without form and wanted his followers to practice meditation upon the name of God for peace and ultimate salvation. He is considered the first guru by the Sikhs. Guru Nanak had great contempt for Vedic rituals and caste discriminations. The teachings of Guru Nanak formed the basis of Sikhism, a new religious order, founded in the late 15th century. His and his successors' teachings are collected in the *Guru Granth Sahib,* which is the holy book of the Sikhs. Guru Nanak's teachings were spread through the group singing of hymns, called *kirtan*. The devotees gathered in *dharmashalas* (rest houses), which became *gurudwaras* in course of time.

Guru Nanak nominated his disciple Lehna to succeed him as the guru. Following this precedent, the successors are named by the incumbent Sikh Guru. At the time of Guru Gobind Singh, the custom of *pahul* (baptism by sweetened water stirred with a dagger) was introduced. Those who got baptised became members of a disciplined brotherhood known as the *Khalsa* (meaning the pure). The men were given the title Singh (lion). Every member of the *Khalsa* had to have five distinctive things on his person. These were *kesh* (uncut hair), *kangha* (comb), *kirpan* (dagger), *kada* (steel bangle) and *kachera* (underpants). After Guru Gobind Singh, the holy book *Guru Granth Sahib* is considered the guru and its message is spread by the *Khalsa*.

Five distinctive things of the *Khalsa* members

5. Impact of the Religious/ Bhakti Movement

- The Islamic tenets – unity of God and universal brotherhood – emphasised by the saints promoted harmony and peace.
- Bhakti was a movement of the common people; it used the language of the common people for its devotional literature.
- Bhakti movement opened up space for Indian languages to grow. It stimulated literary activity in regional languages.
- What sustained Sanskrit, despite its decline during this period, was the support extended by the rulers of Hindu kingdoms.
- Tamil was the only ancient Indian language remained vibrant during this period. But the ethos of Tamil literature in medieval time had changed. In the classical period, it had secular literature depicting the everyday life, its joys and sorrows, but under the influence of devotional cults, its emphasis shifted to religion and religious literature.
- Caste system and social disparities came to be criticised.

Summary

❖ The Bhakti movement is explained. Azhwars' initiatives followed by Nayanmars in Tamil country are described.

❖ Adi Shankarar's *advaita* philosophy and Ramanujar's *vishistadvaita* philosophy are explained.

❖ The devotional paths of saints, notably Tulsidas and Meera Bai, in northern India and Chaitanyadeva in Bengal are examined.

❖ Mutual influence of Islam and Hinduism and birth of Sufism, Sikhism and mystical Hinduism are discussed in brief.

❖ Radical versions of Bhakti Movement: Contribution of Kabir and Guru Nanak are detailed.

❖ The essential features of Bhakti Movement are highlighted.

❖ The impact of the Bhakti Movement on the medieval Indian society is analysed.

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Glossary

1.	salvation	a way of being saved from danger, loss or harm	நிவர்த்தி, விமோசனம்
2.	omnipresent	present everywhere at the same time	எங்கும் நிறைந்திருக்கின்ற
3.	incarnation	a living being embodying a deity or spirit	அவதாரம்
4.	hostile	showing enmity or dislike, unfriendly	விரோதமாக, பகைமையுள்ள
5.	prominence	importance	முக்கியத்துவம்
6.	adherent	supporter (of a person, cause or belief)	ஆதரவாளர், பின்பற்றுபவர்
7.	stringent	severe, harsh	கடுமையான, கெடுபிடியான
8.	ulema	Islamic scholar trained in Islamic law	இஸ்லாமியப் பேரறிஞர்
9.	hermitage	the dwelling of persons living in seclusion	ஆசிரமம், துறவி வாழிடம்
10.	akin	similar	ஒத்த இயல்புடைய
11.	dagger	short, pointed knife that is sharp on both sides	குத்துவாள், குறுவாள்
12.	depicting	showing, portraying	சித்தரிக்கும், விவரமாக விளக்கும்
13.	disparity	a great difference, the state of being unequal	வேறுபாடு, சமமற்ற

Evaluation

I. Choose the correct answer:

1. Who of the following composed songs on Krishna putting himself in the place of mother Yashoda?
   a) Poigaiazhwar b) Periyazhwar
   c) Nammazhwar d) Andal

2. Who preached the *Advaita* philosophy?
   a) Ramanujar b) Ramananda
   c) Nammazhwar d) Adi Shankara

3. Who spread the Bhakthi ideology in northern India and made it a mass movement?
   a) Vallabhacharya b) Ramanujar
   c) Ramananda d) Surdas

4. Who made *Chishti* order popular in India?
   a) Moinuddin Chishti
   b) Suhrawardi
   c) Amir Khusru
   d) Nizamuddin Auliya

5. Who is considered their first guru by the Sikhs?
   a) Lehna
   b) Guru Amir Singh
   c) Guru Nanak
   d) Guru Gobind Singh

II. Fill in the Blanks:

1. Periyazhwar was earlier known as ______________.
2. ________________ is the holy book of the Sikhs.
3. Meerabai was the disciple of ____________.
4. ______________ philosophy is known as *vishistadvaita.*
5. Gurudwara Darbar Sahib is situated at ________________ in Pakistan.

III. Match the following:

1. *Pahul*	–	Kabir
2. *Ramcharitmanas*	–	Sikhs
3. *Srivaishnavism*	–	Abdul-Wahid Abu Najib
4. *Granthavali*	–	Guru Gobind Singh
5. *Suhrawardi*	–	Tulsidas

IV. Find out the right pair/pairs:

1. Andal	-	Srivilliputhur
2. Tukaram	-	Bengal
3. Chaitanyadeva	-	Maharashtra
4. Brahma-sutra	-	Vallabacharya
5. Gurudwaras	-	Sikhs

2. **Assertion (A):** After Guru Gobind Singh, the holy book *Guru Granth Sahib* came to be considered the guru.

   Reason (R): Guru Gobind Singh was the compiler of *Guru Granth Sahib.*

   a) R is not the correct explanation of A
   b) R is the correct explanation of A
   c) A is correct but R is wrong
   d) Both A and R are wrong

3. **Find the odd person out**

   Poigai Azhwar, Bhoothathu Azhwar, Periazhwar, Andal, Nammazhwar.

V. State true or false:

1. Sufism was responsible for the spread of Islamic culture.
2. The best known Sufi sage of the early medieval period was Nizamuddin Auliya of the *Chishti* order.
3. Guru Nanak is considered the first guru of Sikhs.
4. Sufis believed that realization of God can be achieved only through passionate devotion to God and intense meditation.
5. The basic Tamil Saivite sacred canon consists of 12 books.

VI. Give short answers:

1. What do you know about *Tirumurai?*
2. How many Nayanmars were there and who were prominent among them?
3. How did Gurunanak help to found Sikhism?.
4. What had Tukkaram to do with the Vitthoba temple of Pantharpur?
5. Highlight the spiritual ideas of Kabir that appealed to lower classes.

VII. Answer the following in detail:

1. Give an account of the contributions of exponents of Bhakti Movement in the southern as well as northern parts of India.
2. What is Sufism? How did it find its footing in India?
3. What impact did Bhakti movement make on Indian society?

VIII. Activity:

Visiting the living places as well as the places associated with the Bhakthi saints in Tamil Nadu.

Unit -2

Art and Architecture of Tamil Nadu

Learning Objectives

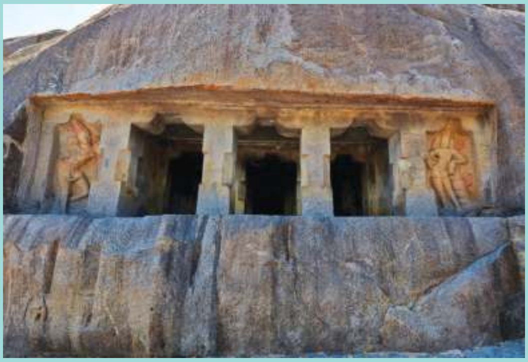
- To understand the evolution of temple architecture in South India
- To gain knowledge about the cultural heritage of Tamils
- To know the contribution of Pallavas, Cholas, Vijayanagara and Nayak rulers to the development of temple art in Tamil Nadu

Introduction

Dravidian architecture is of indigenous origin. It advanced over time by a process of evolution. The earliest examples of the Tamil Dravidian architectural tradition were the 7th century rock-cut shrines at Mahabalipuram. The absence of monuments in South India prior to the 7th century is attributed by scholars to temples ought to have been built in wood, which were eventually destroyed by forces of nature. In Tamil Nadu, the evolution of temple architecture took place in five stages: (1) The Pallava Architecture Epoch AD (CE). 600 to 850); (2) Early Chola Architecture Epoch AD (CE) 850 to 1100); (3) Later Chola Architecture Epoch AD (CE) 1100 to 1350); (4) Vijayanagara / Nayak Architecture Epoch AD (CE) 1350 to 1600); and (5) Modern Architecture Epoch (After AD (CE) 1600).

Pallava Epoch

The Pallava epoch witnessed a transition from rock-cut to free-standing temples. Rock-cut temples were initially built by carving a rock to the required design and then rocks were cut to build temples. The Pallava king Mahendravarman was a pioneer in rock-cut architecture. Mandagapattu temple was the first rock-cut temple built by him. The rock-cut cave structure has two pillars in the front that hold it. All the cave temples have simple sanctum cut on the rear side of the wall with a frontage-projecting *mandapa* (pavilion).



Rock-cut Cave Temple, Mandagapattu

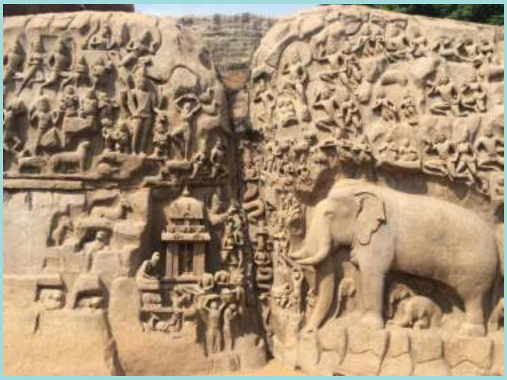
Kanchi Kailasanatha Temple

Kanchi Vaikuntha Perumal Temple

On either side are two *dwarapalas* (gatekeepers). This cave architecture reached its decadent phase after AD (CE) 700 and gave way to the large structural temples probably because the structural temples provided a wider scope to the sculptor to use his skill.

The Shore Temple at Mahabalipuram, also called the Seven Pagodas, was built by the Pallava king Narasimhavarman II. It is the oldest structural temple in South India. The structural temples were built using blocks of rock instead of a whole block as earlier. Narasimhavarman II, also known as Rajasimha, built the Kanchi Kailasanatha temple. The Vaikuntha Perumal temple at Kanchipuram was built by Nandivarman II. Mahabalipuram (Mamallapuram) is built of cut stones rather than carved out of caves. It has two shrines, one dedicated to Siva and the other to Vishnu.

The Tamil Dravida tradition is exemplified by rock-cut monuments such as *Pancha Pandava Rathas*, namely Draupadi ratha, Dharmaraja ratha, Bheema ratha, Arjuna ratha and Nagula-Sahadeva ratha. The outer walls of the rathas, especially of Arjuna, Bhima and Dharmaraja, are decorated with niches and motifs. The niches have the sculptures of gods, goddesses, monarchs and scenes from mythology. The *Arjuna's Penance*, carved on the face of a granite boulder, is a magnificent relief, measuring approximately 100 ft long by 45 ft high.



Arjuna's Penance

The Mamallapuram monuments and temples, including the Shore Temple complex, were notified as a UNESCO World Heritage Site in 1984.

Pandya Temples in the Pallava Epoch

Early Pandyas were the contemporaries of the Pallavas. Unlike the Pallavas, Pandyas installed deities in the sanctums in their cave temples. More than fifty cave temples

have been found in different parts of the Pandyan Empire. The most important of them are found in Malaiyadikurichi, Anaimalai, Tiruparankundram and Trichirappali. These caves were dedicated to Siva, Vishnu and Brahma. In the Siva temple of Pandyas, the *linga* is carved out of the mother rock. The figure of Nandhi is also carved out of the rock. The Siva lingam in the sanctum is installed in the centre with enough space all around it. The sanctum also has a drainage canal. The pillars are divided into three parts and are of different sizes. The pillars have no uniform ornamentation. The back side walls are divided into four niches on which the bas- relief images of Siva, Vishnu, Durga, Ganapathy, Subramanya, Surya, Brahma and Saraswathi are carved out. The *dwarapalas* figure on either side of sanctum.

Rock-cut and structural temples are significant part of the Pandya architecture. The illustrious example for rock-cut style is unfinished Kazhugumalai Vettuvankoil temple. The Vettuvankoil, a monolithic temple at Kazhugumalai, is hewn out of a huge boulder on four sides. At the top of the temple, sculptures of Uma Maheswarar, Dakshinamoorthy, Vishnu and Brahma are found. Meenakshi Amman Temple in Madurai and Nellaiappar Temple in Tirunelveli represent examples of Pandyas' architectural style.

Monolithic Temple, Kazhugumalai

Nellaiappar Temple Corridor, Tirunelveli

Sculptures

The walls of the caves are decorated with the bas relief of the gods and goddesses. In the case of structural temples, the walls of the sanctums are free from image decorations. Instead the superstructures and the pillars have the sculptures. The sculptures look majestic, having elaborate shoulders, slim bodies, beautiful ornaments and high crowns.

Vettuvankoil Temple Sculptures

Tiruparankundram, Anaimalai and Kazhugumalai have the bas relief of many deities: Siva, Vishnu, Brahma, Parvathi, Subramanya, Ganapathi and Dakshinamoorthy. These are some remarkable images of the cave temples. Many early Pandya images unearthed from Madurai and its surrounding areas are now in Tirumalai Nayakkar museum at Madurai.

Paintings

Caves at Sittanavasal, 15 kilometres away from Pudukkottai, and at Tirumalapuram in Sankarankovil taluk, Tirunelveli district, have outstanding early Pandya paintings. Sittanavasal was a residential cave of the Jain monks. They painted the walls with fresco painting. Unfortunately, we have lost many of those paintings. Among the surviving ones, the lotus pond is notable for its excellent execution of colours and exposition of the scene. The image of lotus flowers, leaves spread all over the pond, animals, elephants, buffaloes, swans and a man who plucks the flowers look brilliant.

Sittanavasal Paintings

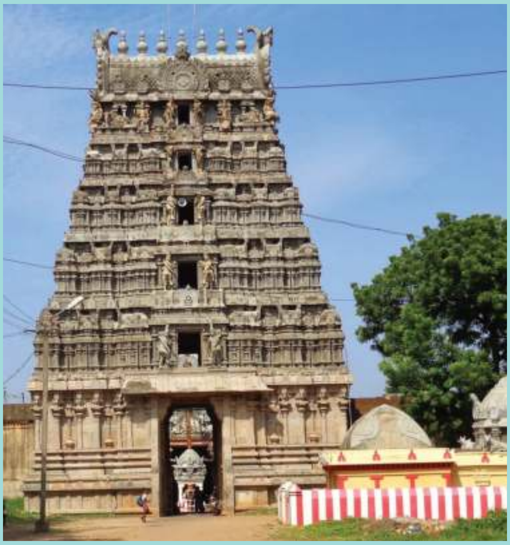
Thirumalaipuram Sculptures

The Sittanavasal paintings have similarities with the Ajantha paintings. Tirumalaipuram, from where we get early Pandya paintings, are in a damaged condition.

The Early Chola Epoch

The Cholas came to limelight in AD (CE) 850 under Vijaylaya Chola and continued to govern the region for about four hundred years. For the Early Chola epoch, the temple at Dadapuram, near Tindivanam in TamilNadu, is worth mentioning.

The early Chola architecture followed the style of Sembian Mahadevi. Temples with the increased number of *devakoshta* (niche) figures can be classified as belonging to the Sembiyan style. Tiruppurambiyam is an illustrious example of early temple that was re-fashioned in the days of Sembiyan Mahadevi.



Tirupurambiyam Temple

Later Chola Epoch

The maturity attained by Chola architecture is reflected in the two magnificent temples of Thanjavur and Gangaikonda

Brihadeeshwara Temple, Thanjavur

Gangaikonda Cholapuram Temple

Cholapuram. The magnificent Thanjavur Big Temple dedicated to Siva, completed around AD (CE) 1009, is a fitting memorial to the material achievements of the time of Rajaraja.

Thanjavur Big Temple

At the time the Big Temple of Thanjavur was constructed, it was a huge temple complex. The 216 feet *vimana* (structure over the *garbhagriha*) is notable as it is one among the tallest man-made *shikaras* of the world. Due to its massive height, the *shikara* is called the Dakshina Meru. The huge bull statue (Nandi) measures about 16 feet long and 13 feet height and is carved out of a single rock

Gangaikonda Cholapuram

Gangaikonda Cholapuram served as the Chola capital for about 250 years, until the decline of the Cholas and the rise of the Pandyas. The Brihadeeshwara temple of Gangaikonda Cholapuram, built by Rajendra Chola, is undoubtedly as worthy a successor to the Brihadeeshwara temple of Thanjavur. The height of the temple is 55 metres. The sanctum has two storeys as in the big temple at Thanjavur. The outer wall has many projections with niches and recesses on three sides. In the niches there are the images of Siva, Vishnu and other gods. This temple complex has the shrines of Chandeeswarar, Ganesa and Mahishasura Mardhini.

Dharasuram

Dharasuram, near Kumbakonam, is a Later Chola period temple, rich in architectural splendour, dedicated to Iravatheswara (Siva as god of lord Indira's elephant). Rajaraja II constructed this temple. This temple is another landmark of the Chola architecture. The *Mahamandapam* is an elaborate structure. The entire structure looks like a *ratha* because it has four wheels at the *Mahamandapam*. The sanctum and pillars have many sculptures, which are miniatures of various mythological figures. A compound wall runs round the temple with a *gopuram*.

Iravatheswara Temple

Later Pandyas

The contribution of Later Pandyas to South Indian art was significant. A case in point is the cave temple at Pillayarpatti (near Karaikudi, TamilNadu) belonging to 13th century. This temple is important both for its sculptures and for an inscription. A beautiful Ganesha is carved facing the entrance. The importance of the figure, referred to *Desivinayaga* in the cave inscription, is that there are two arms with the trunk turning to the right

Pillayarpatti Temple and Karpaka Vinayagar

Vijayanagara Epoch

During the Vijayanagara epoch, a new form of construction emerged. It is the *mandapam* (pavilion) to where the gods are carried every year. Pillared outdoor *mandapams* are meant for public rituals with the ones in the east serving as the waiting room for devotees, which adorn the large temples. These *mandapams* attract attention for its monolithic pillars. On these pillars are sculptured horses, lions and the gods. The kalyana mandapam at Kanchipuram (Varadaraja Perumal temple) and at Vellore (Jalagandeshwar temple) are notable examples. The most celebrated of these *mandapams* in temple of Madurai is the Pudumandapam.

Vellore Jalagandeshwar Temple Kalyana Mandapam

The main features of the Vijayanagar and Nayak architecture are decorated mandapas, ornamental pillars, life-size images, gopuras, prakaras, music pillars, floral works and stone windows during the 15th to 17th centuries. Tanks are attached to the temples. Gateways to temple are constructed from four directions with massive *gopurams*.

The practice of fitting the niches with sculptures continued during the Nayak period. There was an increased use of major sculpted figures (relief sculpture) as found at the Alakiya Nambi temple at Tirukkurungudi (Tirunelveli district) and the Gopalakrishna temple in the Ranganatha temple complex at Srirangam. The southern festival mandapam of Adinatha temple at Azhwar Tirunagari and the porch of the Nellaiyappar temple at Tirunelveli are other notable examples.

Mandapam of Adinatha Temple, Azhwar Tirunagari

In TamilNadu, the image of deities attached to composite columns gradually freed themselves from the core column. The 1000-pillar *mandapam* of the Meenakshi-Sundareswarar temple, Pudumandapam at Madurai, Rathi Mandapam at Tirukkurungudi and Vanamamalai Temple at Nanguneri are illustrious examples for the *mandapam* architecture of this period.

1000-Pillar Mandapam, Madurai Meenakshiamman Temple

The pillars of this period are more decorative than the previous period. Monolithic gigantic *yazhi* pillars, horse pillars with life-size portraits of mythological and royal family members, common folk, animals and floral works were made. Musical pillars were the peculiar feature of this time. A sitting lion at the top of the pillars is a common feature in the *mandapams*. The windows are carved out on the walls of the sanctum and *mandapams*.

The Jalagandeshwara temple at Vellore, the temples at Thadikompu near Dindugal and Krishnapuram near Tirunelveli and the Subramanya shrine in the Big Temple Thanjavur are most remarkable edifices of this time. Vijayanagar and Nayak paintings are seen at Varadharaja Perumal temple at Kanchipuram, Kudalazhagar Temple at Madurai and the temples of Srivilliputhur, Tiruvellarai, Azhaharkoil, Tiruvannamalai and Srirangam. The paintings mostly have the stories from Ramayana, palace scenes and mythological stories.

Sculptures in Varatharaja Temple, Kanchipuram

Modern Period (After AD(CE) 1600)

The Sethupathis, as the feudatories of Madurai Nayaks, ruled Ramanathapuram and contributed to the Ramanathaswamy temple architecture. In the temple of Rameswaram, the predominance of corridors is striking. It is claimed that this temple has the longest set of corridors in the world. The temple has three sets of corridors. The outer set of the temple's corridors has a height of almost 7 metres and stretches for about 120 metres in both the eastern and western directions. The corridors to the north and to the south, on the other hand, are about 195 metres in length. The outer corridor is also remarkable for the number of pillars that support it, which is over 1200 in number. Moreover, many of these pillars are decorated by ornate carvings. The innermost set of corridors is the oldest of the three.

Ramanathaswamy Temple Corridor, Rameswaram

Summary

In sum, the Pallava period featured sculptural rocks. The early Chola period was marked by grand *vimanas.* The Later Chola period was known for beautiful *gopurams.* Vijayanagar period's unique feature was the *mandapam* and the modern period was when corridors were given prominence.

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Glossary

1.	indigenous	native	சுதேசம், உள் நாடு
2.	epoch	era, age	சகாப்தம், வரலாற்றின் ஒரு காலகட்டம்
3.	sanctum	a sacred place set apart in a temple	கருவறை
4.	decadent	corrupt, a state of moral decline	சீர்கேடான
5.	exemplified	illustrated, represented	எடுத்துக்காட்டாய் திகழ்கிறது
6.	niche	a cavity, especially in a wall to display a statue	சிலை வைக்கப்படும் இடம்
7.	motif	a decorative design forming a pattern in an artistic work	கலைப்பண்புக் கூறு
8.	boulder	a very large rock	பெரிய கற்பாறை, பாறாங்கல்
9.	contemporaries	living or occurring at the same time	சமகாலத்தைச் சேர்ந்தவர்கள்
10.	hewn	cut out and shaped	செதுக்கப்பட்ட
11.	bas-relief	a sculpture carved into a wall	சுவற்றில் செதுக்கப்படும் சிற்பம்
12.	execution	carrying out	செயல் திறன், ஒன்றைச் செய்து முடித்தல்
13.	recesses	hollow spaces inside the wall or a structure	உட்பகுதிகள், இடைவெளிகள்

Evaluation

I. Choose the correct answer:

1. Which is the oldest structural temple in south India?
   a) Shore Temple
   b) Mandagapattu
   c) Kailasanatha Temple
   d) Vaikuntha Perumal Temple

2. In which year were the Mamallapuram monuments and temples notified as a UNESCO world Heritage site?
   a) 1964 b) 1994
   c) 1974 d) 1984

3. What was the special feature of the architecture of early Chola period?
   a) bas-reliefs b) *vimanas*
   c) corridors d) *gopurams*

4. Where is the Azhakiya Nambi Temple situated?
   a) Tirukkurungudi b) Madurai
   c) Tirunelveli d) Srivilliputhur

5. Who built the Vaikuntha Perumal Temple?
   a) Mahendravarman
   b) Narasimhavarman
   c) Rajasimha
   d) Rajaraja II

II. Fill in the Blanks:

1. ____________ was the first rock-cut cave temple built by the Pallava king Mahendravarman.
2. The early Chola architecture followed the style of ____________.
3. The most celebrated *mandapam* in Madurai Meenakshiamman temple is the____________.
4. Later Chola period was known for beautiful ____________.
5. Vijayanagar period's unique feature is the ____________.

III. Match the following:

1. Seven Pagodas	–	Madurai
2. Rathi mandapam	–	Darasuram
3. Iravatheswara temple	–	Tirukkurungudi
4. Adinatha Temple	–	Shore temple
5. Pudumandapam	–	Azhwar Tirunagari

IV. Find out the wrong pair/pairs:

1. Krishnapuram Temple	–	Tirunelveli
2. Kudalazhagar Temple	–	Azhwar Tirunagari
3. Sethupathis	–	Feudatories of Madurai Nayaks
4. Jalagandeshwara temple	–	Vellore

2. Assertion (A): The predominance of corridors of Rameswaram Temple is striking.

Reason (R): The Temple has the largest set of corridors in the world.

a) R is not the correct explanation of A
b) R is the correct explanation of A
c) A is correct but R is wrong
d) Both A and R are wrong

3. Find out the odd one out:

Srivilliputhur, Azhaharkoil, Srirangam, Kanchipuram, Tiruvannamalai.

4. Find out the correct statement/s:

1) The *Arjuna's Penance* is carved out of a granite boulder.
2) Meenakshi Amman temple in Madurai represents Pallava's architectural style.
3) The cave temple at Pillayarpatti is a contribution of Later Pandyas.
4) The Sethupathis as feudatories of Madurai Nayaks contributed to Madurai Meenakshiamman Temple.

V. State true or false:

1. Rajasimha built the Kanchi Kailasanatha temple.
2. Early Pandyas were the contemporaries of Later Cholas.
3. Rock-cut and structural temples are significant parts of the Pandya architecture
4. Brihadeeshwara temple was built by Rajendra Chola.
5. Vijayanagar and Nayak paintings are seen at temple at Dadapuram.

VI. Give short answers:

1. Write a note on *Pancha Pandava* Rathas.
2. Throw light on the paintings of Sittanavasal.
3. Point out the special features of Thanjavur Big temple.
4. Highlight the striking features of Rameswaram Temple.

VII. Answer the following in detail

1. The Pallava epoch witnessed a transition from rock-cut to free–standing temples – Explain.
2. Discuss how the architecture of Vijayanagara and Nayak period was different from the one of Pallavas and Later Cholas.

VIII. HOTS:

1. Dravidian architecture is of indigenous origin - Explain.
2. Temple art was at its best during the Nayak Period - Elucidate.

IX. Activity:

Visiting temples built during the times of Pallavas, Cholas, Pandyas and Nayak rulers and see the differences in the structural and sculptural designs of each epoch.

Unit -3

Jainism, Buddhism and Ajivika Philosophy in Tamil Nadu

Learning Objectives

- To know the sources and literature of heterodox religious sects: Jainism, Buddhism and Ajivikam
- To gain knowledge of the teachings of Mahavira, Buddha and Gosala, the founder of Ajivika sect.
- To acquaint ourselves with the monuments of the above-mentioned religious sects in Tamil Nadu.

Introduction

During the 6th century BC (BCE), according to the *Bigha Nitaya* (an ancient Buddhist tract), as many as 62 different philosophical and religious schools flourished in India. However, among these numerous sects, only the Ajivikas survived till the late medieval times. But Jainism and Buddhism continued to flourish until the modern times. Buddha and Mahavira, the founders of these two faiths, based their ethical teachings against the sacrificial cult of the Vedic religion. Their teachings were preserved and passed on through monks, who were drawn from various social groups.

Sources and Literature: Jainism

Mahavira's preaching was orally transmitted by his disciples over the course of about one thousand years. In the early period of Jainism, monks strictly followed the five great vows of Jainism. Even religious scriptures were considered possessions and therefore knowledge of the religion was never documented. Two hundred years after the attainment of *nirvana* (death) of Mahavira, Jain scholars attempted to codify the canon by convening an assembly at Pataliputra. It was the first Jain council to debate the issue, but it ended as a failure because the council could not arrive at a unanimous decision in defining the canon. A second council held at Vallabhi, in the 5th century AD (CE) was, however, successful in resolving the differences. This enabled the scholars of the time to explain the principles of Jainism with certainty. Also, over time, many learned monks, older in age and rich in wisdom, had compiled

commentaries on various topics pertaining to the Jain religion. Around 500 AD (CE) the Jain *acharyas* (teachers) realised that it was extremely difficult to keep memorising the entire Jain literature complied by the many scholars of the past and present. In fact, significant knowledge was already lost and the rest was tampered with modifications. Hence, they decided to document the Jain literature as known to them.

> Five Great Vows of Jainism: 1. Non-violence – *Ahimsa;* 2. Truth– *Satya;* 3. Non-stealing – *Achaurya;* 4. Celibacy/Chastity – *Brahmacharya;* 5. Non-possession – *Aparigraha.*

A major split occurred in Jainism (1st century BC (BCE), giving rise to two major sects, namely *Digambaras* and *Swetambaras*. Both the *Digambaras* and the *Swetambaras* generally acknowledge the *Agama Sutras* to be their early literature, while they do differ with regard to their content and interpretation.

Jain Literature

Jain literature is generally classified into two major categories.

1. Agama Sutras

Agama Sutras consists of many sacred books of the Jain religion. They have been written in the Ardha-magadhi Prakrit language. Containing the direct preaching of Mahavira, consisting of 12 texts, they were originally compiled by immediate disciples of Mahavira. The 12^{th} Agama Sutra is said to have been lost.

2. Non-Agama Literature

Non-Agama literature includes commentary and explanation of Agama Sutras, and independent works, compiled by ascetics and scholars. They are written in many languages such as Prakrit, Sanskrit, old Marathi, Rajasthani, Gujarati, Hindi, Kannada, Tamil, German and English. Recognition was given to 84 books, and among them, there are 41 sutras, 12 commentaries and one *Maha Bhasya* or great commentary. The 41 sutras include 11 *Angas* (scriptures followed by *Swetambaras*), 12 *Upangas* (instructions manuals), five *Chedas* (rules of conduct for the monks), five *Mulas* (basic doctrine of Jainism) and eight miscellaneous works, such as *Kalpasutra* of Bhadrabahu. It is believed that the *Panchatantra* has a great amount of Jain influence.

> The *Jainacharitha* of *Kalpa Sūtra* is a Jain text containing the biographies of the Jain Tirthankaras, notably Parshvanatha, founder of Jainism as well as the first Tirthankara, and Mahavira, the last and the 24^{th} Tirthankara. This work is ascribed to Bhadrabahu, who along with Chandragupta Maurya migrated to Mysore (about 296 BC (BCE) and settled there.

> Tirthankaras are those who have attained *nirvana* and made a passage from this world to the next.

In addition to these, we have some Jain texts composed in Indian vernacular languages such as Hindi, Tamil and Kannada. *Jivaka Chintamani,* a Tamil epic poem, is a good example, composed in the tradition of Sangam literature by a Jain saint named Tiruthakkathevar. It narrates the life of a pious king who rose to prominence by his own merit only to become an ascetic in the end. Another scholarly work in Tamil, *Naladiyar,* is also attributed to a Jain monk. *Thirukkural* was composed by Tiruvalluvar, believed to be a Jain scholar.

Jains in Tamil Nadu

There is a clear evidence of the movements of the Jains from Karnataka to the Kongu region (Salem, Erode and Coimbatore areas), to the Kaveri Delta (Tiruchirapalli) southwards into Pudukkottai region (Sittannavasal) and finally into the Pandya kingdom (Madurai, Ramanathapuram and Tirunelveli districts). Tamils broadly come under *Digambara* sect. It is believed that the Kalabhras were the patrons of Jainism.

The Sittanavasal Cave Temple

Sittanavasal cave in Pudukkottai district is located on a prominent rock that stands 70 m above the ground. It has a natural cavern, known as Eladipattam, at one end, and a rock-cut cave temple at the other. Behind the fenced cavern, there are 17 rock beds marked on the floor. The stone berths aligned in rows are believed to have served as a Jain shelter. The largest of these ascetic beds contains a Tamil-Brahmi inscription that dates to the 2nd century BC (BCE) There are more inscriptions in Tamil from the 8th century AD (CE) bearing the names of monks. It is believed that they should have spent their lives in isolation here.

Sittanavasal Cave

The Sittanavasal cave temple, named Arivar Koil, lies on the west off the hillock. The facade of the temple is simple, with four rock-cut columns. Constructed in the early Pandya period, in the 7th century AD (CE) it has a hall in the front called the Ardha-mandapam and a smaller cell at the rear, which is the *garbha graha* (sanctum sanctorum).

Fresco Paintings, Sittanavasal

The murals in the temple resemble the frescoes of the famous Ajanta caves. The Archaeological Survey of India (ASI) took over the caves only in 1958. Thereafter it took two decades to cover the cave and regulate the entry of visitors. There are the bas- relief figures of Tirthankaras on the left wall of the hall and acharyas on the right before one enters the inner chamber, the sanctum sanctorum.

Jains in Kanchipuram (Tiruparuttikunram)

Jainism flourished during the Pallava reign. In his writings, Chinese traveller Hiuen Tsang has mentioned about the presence of a large number of Buddhists and Jains during his visit to the Pallava country in 7th century AD (CE). Most of the Pallava rulers were Jains. Mahendravarman was a Jain initially. The two Jain temples in Kanchipuram are Trilokyanatha Jinaswamy Temple at Tiruparuttikunram, on the banks of the river Palar, and the Chandra Prabha temple dedicated to the Tirtankara named Chandraprabha. The architecture of these temples is in Pallava style, but it has deteriorated in due course of time. During the Vijayanagar rule (1387), Irugappa, a disciple of Jaina-muni Pushpasena; and a minister of Vijayanagar King Harihara II (1377-1404), expanded the Trilokyanatha Temple by adding the Sangeetha mandapa. The grand murals were added only at this time.

Jain Temple, Tiruparuttikunram

Mural paintings in the temples show scenes from the lives of Tirtankaras. Unfortunately the paintings of the Trilokyanatha temple at Tiruparuttikunram have been ruined by over-painting done during renovation. There is rich inscriptional evidence inside the second shrine, the Trikuda Basti, containing information on the development of the temple, and the contributions of various donors over the centuries.

Paintings on the walls of the Trilokyanatha Temple

In the Kanchipuram district, apart from Tiruparuttikunram, Jain vestiges have been found over the years in many villages across the state.

The total population of Jains in Tamil Nadu is 83,359 or 0.12 per cent of the population as per the 2011 census.

Kazhugumalai Jain Rock-Cut Temple

The 8th century Kazhugumalai temple in Kovilpatti taluk in Thoothukudi district marks the revival of Jainism in Tamil Nadu. This cave temple was built by King Parantaka Nedunjadaiyan of the Pandyan

kingdom. Polished rock-cut cave beds, popularly known as Panchavar Padukkai at Kazhugumalai cavern host the figures of not only the Tirtankaras but also the figures of *yakshas* and *yakshis*.

Sculptures in Kazhugumalai Cave Temple

Jain Temples in other parts of Tamil Nadu

Vellore

Fourteen Jain monk beds, dating back to the 5th century AD (CE) have been excavated inside three caverns on top of a hill in Vellore district. The beds are found at the Bhairavamalai in Latheri, Katpadi taluk, Vellore district. Of the three caverns, two of them house beds. One houses four rock beds while the other houses one bed. Unlike many rock beds found elsewhere, these ones have no head-rests.

Tirumalai

Tirumalai is a Jain temple in a cave complex located near Arni town in Tiruvannamalai district in Tamil Nadu. The complex, dated to the 12th century AD (CE) includes three Jain caves, two Jain temples and a 16.5 feet-high sculpture of Neminatha, the 22nd Tirthankara. This image of Neminatha is considered to be the tallest Jain image in Tamil Nadu.

Madurai

There are 26 caves, 200 stone beds, 60 inscriptions and over 100 sculptures in and around Madurai. The Kizha Kuyil Kudi is a striking example. This hillock is 12 kilometres west of Madurai, on the Madurai–Theni Highway. The sculptures are assigned to the period of Parantaka Veera Narayana Pandyan who ruled from AD CE). 860 to 900. There are eight sculptures. The images of Rishab Nath or Adinath, Mahavira, Parshvanath and Bahubali are found here.

Rock-cut Jain Temple, Kizha Kuyil Kudi

Contribution to Education

Jaina monasteries and temples also served as seats of learning. Education was imparted in these institutions to the people irrespective of caste and creed. The Jainas propagated their doctrines and proved to be a potential media of mass education. The Bhairavamalai we have mentioned earlier is situated near a small village called Kukkara Palli. 'Palli' is an educational centre of Jains and villages bearing the suffix of Palli are common in many places in Tamil Nadu.

The educational institutions had libraries attached to them. Several books were written by the preachers of Jainism, highlighting the important aspects of Jainism. The permission for women to enter into the order provided an impetus to the spread of education among women.

Buddhism

Buddha's original name, Siddhartha Sakya-muni Gautama, if translated into English, would mean *Gautama who belongs to the Sakya tribe and who has reached the goal of perfection.* Gautama Buddha was a contemporary of Mahavira. His father ruled the tribe of Sakya in a region near the present-day Nepal. Gautama found that he had nothing to learn from the teachers of the old religions. The religions proclaimed that the only way to salvation was through living the life of an ascetic. But despite practicing asceticism, Gautama could not arrive anywhere near the truth. And one night, as he sat under a bodhi-tree struggling with his doubt and his loneliness, a great peace descended on him. He was no longer Gautama, the sceptic, but became Buddha, the Enlightened. At last, he had succeeded in understanding the great mystery of human suffering, its causes and its cure. Asserting that both the king (passion for pleasures) and the hermit (self-mortifications) were wrong, he discovered the middle path. The middle path is based on 'an eight-fold path' of Right understanding , Right thought, Right speech, Right action, Right livelihood, Right effort, Right mindfulness, Right concentration.

Buddha taught not the glory of God but the power of love. He held the view that all men are born to an 'equality of rights'. He undertook long journeys and carried his message far and wide. Buddha preached his teachings in Prakrit. His four noble truths are as follows:

1. Life includes pain, getting old, disease, and ultimately death.
2. Suffering is caused by craving and aversion.
3. Suffering can be overcome and happiness attained.
4. True happiness and contentment are possible, if one pursues the eight-fold path.

Buddhist Literature

Buddha's teachings for a long time were transmitted through the memory of teachers and disciples. They were reduced to writing by 80 BC (BCE). and were written in the Pali language. The Pali canon *Tripitaka* has three divisions, also known as the Threefold Basket. They include *Vinaya Pitaka, Sutta Pitaka* and *Abhidhamma Pitaka.*

Vinaya Pitaka contains the rules of the order of Buddhist monks, which must be observed for achieving purity of conduct.

Sutta Pitaka lays down the principles of religion by citing discourses as evidence.

Abhidhamma Pitaka is the latest of the Tripitaka. It deals with ethics, philosophy and meta-physics. Other prominent canonical literary works in Buddhism include:

Jatakas – various stories of the lives of the Buddha found in Buddhist literature.

Buddhavamsa – A legend in verse, containing a narration of the life and activities of the 24 Buddhas who are believed to have preceded Gautama. Apart from the above canonical literature, there is a long series of non-canonical literature in Pali. They include:

- ***Milindapanha*** – which means 'questions of Milinda'. It contains a dialogue between Milinda, the Graeco-Bactrian king, and the monk Nagasena over some problems that faced Buddhism. It was originally written in Sanskrit.
- The two famous Ceylonese chronicles are ***Mahavamsa*** and ***Dipavamsa***. The former deals with the royal dynasties of the Indian subcontinent including Sri Lanka, while the latter deals with the arrival of the Buddha's teachings and preachers in Sri Lanka.
- **Buddhagosha's *Visuddhimagga*** is a later work. He is the first Buddhist commentator.
- Sanskrit literature became prominent in Buddhism with the rise of Mahayana Buddhism. However, some of the Sanskritic works were produced by the Hinayana school as well. *Buddhacharita*, written by Asvaghosa, is an epic style Sanskrit work. It tells the life history of Gautama Buddha.

Buddhism in Tamizhakam

Buddhism is believed to have spread to the Tamil country by the Ceylonese missionaries. The evidence in support of this is some monuments of the Pandya country, which are assigned to the 3rd century BC (BCE). The monuments are in caverns known as Pancha Pandava Malai. Buddhism seems to have flourished and co-existed peacefully with Jainism, Ajivikam and also with various sects of Hinduism. Since the time of Bhakti Movement, Buddhism came to be challenged by its exponents and began to lose royal patronage. The *Thevaram* hymns of Saiva saints and the *Nalayira Divyaprabandam* of Vaishnava Azhwars provided evidence to the challenges Buddhism faced in Tamil country. When Hieun Tsang, the Chinese traveller, visited south India in the 7th century, Buddhism was almost on the decline.

But contrary to popular perception, the Buddhism did not disappear completely. The presence of *Virasozhiyam* (a 11th century Later Chola period grammar text, composed by a Buddhist) and the discovery of 13th century Buddhist bronzes in Nagapattinam testify to the presence of Buddhism in later periods. The sculptures of Buddha in Thiyaganur village in Salem district strengthen this conclusion.

Buddha image, Thiyaganur

Though Buddhism faced challenges from Saiva and Vaishnava sects from the Pallava period onwards. One of the exceptions was Nagapattinam, which was supported by Chola kings, not for religious but for political reasons. Chudamani Vihara of Nagapattinam was constructed by the Srivijaya king with the patronage of Rajaraja Chola. This vihara has been since destroyed. The Tamil epic, *Manimekalai,* written by Kulavanigan Sithalai Sattanar, is considered a typical representation of Tamil Buddhism. Sattanar indigenised Buddhism into Tamil Buddhism by communicating a large set of Buddhist terms in Tamil, as translations from Sanskrit and Pali.

There is a record about a Buddhist monk named Vajrabodhi, who was skilled in tantric rituals, but this monk left the Pallava court for China. Mahendravarman's *Mattavilāsa Prahasana* describes Buddhism as a religion in decay.

In the field of education, Buddhist *Sanghas* and *Viharas* served as centres of education. Students from various parts of the world came here to receive education. Nalanda, Taxila and Vikramshila gained reputation as great educational centres. They were originally Buddhist Viharas. Students from Tibet and China were influenced by Buddhism and they took effective steps to spread Buddhism.

A Vihara in Sanskrit means 'dwelling' or 'house'. Originally, viharas were dwelling places used by wandering monks during the rainy season. Later they transformed into centres of learning through the donations of wealthy lay Buddhists. Royal patronage allowed pre-Muslim India to become a land of many viharas that imparted university education and were treasure troves of sacred texts. Many viharas, such as Nalanda were world famous.

Viharas

Buddhist Vihara of Nalanda in ruins

Excavations of Buddhist Vihara and a temple at Kaveripoompattinam and hundreds of stone and bronze sculptures by ASI from over 125 sites have proved the spread of the religion in the state. A 1.03 metre Buddha statue in *'padmasana'* pose in remote Tirunattiyattankudi village in Tiruvarur district was unearthed when digging a tank in a field.

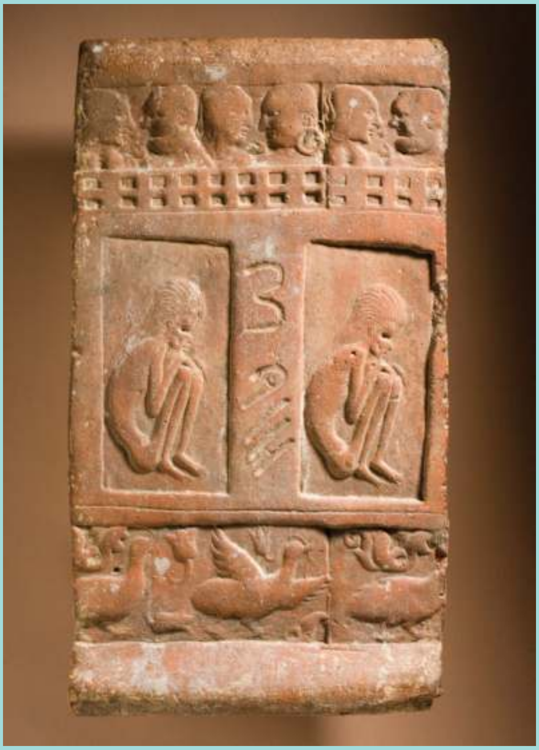
Buddha in '*padmasana*' pose

3. Ajivika Philosophy

The Ajivikas believed in the doctrine of karma, transmigration of the soul and

determinism. The head of Ajivika sect was Makkhali Gosalar. The Ajivikas practiced asceticism of a severe type. The Ajivika religious order and school of philosophy is known from the Vedic hymns, the *Brahmanas*, the *Aryankas* and other ancient Sanskrit compilations and treatises of the pre-Jaina and pre-Buddhist age. Gosala's ideas live on in other religions, though no Ajivika literature has survived.

Gosala was closely associated with Mahavira for six years and then they parted company. The Mauryan emperor Asoka and his grandson Dasaratha patronised the Ajivikas. After the collapse of the Mauryan Empire, the sect declined in northern India, but had by then spread into southern India where it continued to exist for many centuries.



Representational Image of Ajivika ascetics

Throughout history, Ajivikas had to face persecution everywhere. Village communities under Pallavas, Cholas and Hoysalas imposed special taxes on them. Despite such obstacles, Ajivikas continued to have influence along the Palar river in the modern states of Karnataka and Tamil Nadu (Vellore, Kanchipuram and Tiruvallur districts) till about the 14^{th} century. In the end, they seemed to have been absorbed into Saivism or Vaishnavism.

Summary

- Sources and literature for study of Jainism are highlighted.
- Presence of Jains in the Tamil country is examined.
- Jain monuments and art in Tamizhakam, in particular Sittanavasal and Kazhugumalai are illustrated.
- The Jain contribution to education through 'Palli' is explained.
- Buddhist teachings are analysed.
- Buddhism in the Tamil country is explored.
- Buddhist legacy in Tamizhakam is discussed.
- The essence of Ajivika philosophy and its presence in Tamil Nadu is detailed.

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Glossary			
1.	heterodox	not conforming to orthodox beliefs, especially religious ones, unorthodox	பழமை சாராத, வழக்கத்திலுள்ள மதக்கொள்கைக்கு மாறான
2.	canon	a rule, an accepted principle	ஒரு விதி, பொது ஒழுங்கு
3.	unanimous	all sharing the same view	ஒருமனதாக
4.	ascetic	monk, hermit	துறவி, சந்நியாசி
5.	deteriorate	to grow worse	சீர்கெடு, மோசமடை
6.	vestiges	things left behind, remains, traces	தடங்கள், அடையாளங்கள், சுவடுகள்
7.	cavern	a large deep underground cave	அடிநில குகை
8.	hillock	small hill, mound	சிறு குன்று
9.	facade	the front of a building	கட்டடத்தின் முகப்பு
10.	frescoes	paintings done in water colour on a wall or ceiling	சுவரில் அல்லது மேற்கூரையில் வரையப்படும் ஓவியங்கள்
11.	mural	a large picture painted on a wall	சுவரோவியம்
12.	impetus	motivation, stimulus	உத்வேகம், உந்துசக்தி
13.	salvation	saving from harm, ruin or loss	இரட்சிப்பு, முக்தி, விமோசனம்
14.	sceptic (skeptic)	someone who habitually doubts accepted beliefs	ஐயுறவுவாத, சமய ஐயுறவாளர்
15.	craving	a strong desire	அடக்கமுடியாத ஆசை, மிகு விருப்பம்
16.	persecution	unfair treatment of a person or a group, especially because of their religious or political beliefs	துன்புறுத்தல், அடக்குமுறை

Evaluation

I. Choose the correct answer:

1. Where was the first Jain Council held to codify the Jaina canon?
   a) Pataliputra
   b) Vallabhi
   c) Mathura
   d) Kanchipuram

2) In which language was Agama sutras written?
   a) Ardha-Magadhi Prakrit
   b) Hindi
   c) Sanskrit
   d) Pali

3) Which of the following was patronised by the Kalabhras?
   a) Buddhism b) Jainism
   c) Ajivikas d) Hinduism

4) Where are the Rock beds found with no head-rests?
   a) Vellore b) Kanchipuram
   c) Sittanavasal d) Madurai

5) Who is believed to have built the Kazhugumalai Rock-Cut Temple?
   a) Mahendra Varman
   b) Parantaka Nedunchadayan
   c) Parantaka Veera Narayana Pandyan
   d) Harihara II

II. Fill in the blanks:

1) The image of ___________ is considered to be the tallest Jain image in Tamil Nadu.

2) *Buddhacharita* was written by ________________.

3) Chinese traveller Huein Tsang visited Pallava country in ____________ century.

4) ____________ describes Buddhism as a religion in decay.

5) The Mauryan emperor Asoka and his grandson Dasarata patronised ______________.

III. Match the following:

1. *Kalpa sutra* – Tiruthakkathevar
2. *Jivaka Chintamani* – Madurai
3. Neminatha – Nagasena
4. *Milinda Panha* – Bhadrabahu
5. Kizha Kuyil Kudi – 22nd Tirthankara

IV. Answer the following:

1) Find out the odd one

Tiruparuttikunram, Kizha Kuyil Kudi, Kazhugumalai, Nagapattinam, Sittanavasal.

2) **Assertion (A):** Gautama found that he had nothing to learn from the teachers of the old religions.

Reason (R): The religions proclaimed that the only way to salvation was through living the life of an ascetic.

a) A is correct. R is the correct explanation of A.

b) A is correct. R is not the correct explanation of A.

c) Both A and R are wrong.

d) A is wrong. But R is correct.

3) Find out the correct statement/s

i) During the 6th century B.C. as many as 62 religious schools flourished in India.

ii) 'Palli' is an educational centre of Buddhists.

iii) Royal patronage allowed pre-Muslim India to become a land of vihars.

iv) The Ajivikas continued to exist till 15th century.

a) i) and iii) are correct.

b) i), ii) and iv) are correct.

c) i) and ii) are correct.

d) ii), iii) and iv) are correct.

4) Find out the wrong pair/s

1. Parshvanatha – 22nd Tirthankara
2. *Mahabashya* – the Ceylonese Chroniclei
3. *Visuddhimagga* – Buddhagosha
4. Buddha – Eight-fold Path

V. True or False:

1. The 12th Agama Sutra is said to have been lost.
2. Throughout history, Ajivikas had to face persecution everywhere.
3. Education was imparted in institutions of Jains irrespective of caste and creed.
4. Nalanda, Taxila and Vikramashila gained reputation as pilgrim centres.
5. Buddhism faced challenges from Saiva and Vaishnava sects from the Chola period onwards.

VI. Answer the following:

1. Make a list of the Five Great Vows of Jainism.
2. What are the four noble truths of Buddha?
3. Explain the three divisions of Tripitaka.
4. Highlight the importance of Sittanavasal.

VII. Answer in detail:

1. Enumerate the sources of study for Jainism and Buddhism.
2. Give an account of relics of Jainism and Buddhism that have come to light in Tamil Nadu.
3. Discuss the essence of Ajivika philosophy and its presence in Tamil Nadu.

VIII. HOTs:

1. Analyse the commonalities and differences between heterodox religions and Vedic religion.
2. Why did these heterodox religions fail to become mainstream religion in India?

IX. Activity:

Students to visit district museums and places, where excavated Buddhists and Jain relics are on display.

ICT CORNER

BUDDHISM

To know and learn about the Buddhism through this activity.

PROCEDURE :

Step 1: Open the Browser and type the URL (or) Scan the QR Code.

Step 2: Story of Buddha page will appear on the screen.

Step 3: Click on the Image to know about the story of Buddha.

Step 4: Click on the ebook below the image to download the PDF.

Step 1

Step 2

Step 3

Web URL: BUDDHISM

http://www.buddhanet.net/e-learning/buddhism/storybuddha.htm

*Pictures are indicative only

GEOGRAPHY

Unit -1

Exploring Continents – North America and South America

Learning Objectives

- ❖ To understand the location, boundary and political divisions of North America and South America.
- ❖ To understand the physical features and the drainage.
- ❖ To understand the climate, natural vegetation and wildlife of the continents .
- ❖ To discuss the resources, economic activities and cultural mosaic.
- ❖ To develop the skill of locating places on the map.

Introduction

Students : Good morning madam

Teacher : Good morning students. Did you all enjoy your half yearly exam holidays.

Students : Yes madam

Teacher : Fine. How many continents are there in the world? Can anyone of you name them?

Students : Madam there are seven continents. They are North America, South America, Europe, Asia , Antarctica, Australia and Africa.

Teacher : Last year, how many continents you did study?

Students : Madam, we studied about two continents. They are Europe and Asia.

Teacher : Ok, this year we will be learning about North America and South America.

A. North America

North and South America are often referred to as the new world because they were discovered in the late fifteenth century. In 1492 North America was discovered by Christopher Columbus while he was trying to find a new sea route to India. The landmass was named America in 1507 after the Italian explorer Amerigo Vespucci who landed on this

continent. In this lesson we can learn location, boundaries, relief features, rivers, climate, natural vegetation, minerals and transportation.

Location and Area

The continent of North America lies between 7°N and 84°N latitude which lie entirely in the Northern Hemisphere. The Tropic of Cancer(23 ½°N) passes through the Mexico and Arctic Circle (66 ½°N) runs through northern part of Canada. Longitudinally it extends between 53°W and 180°W and lies entirely in the western hemisphere. This continent has a great longitudinal extent which results in Seven Time Zones. North America covers an area of about 24,709,000 Sq. km. Which occupies 16.50 percent of the entire land area.

Boundaries

North America is surrounded by the Pacific Ocean in the West, the Atlantic Ocean in the east, Arctic Ocean in the north and South America in the south. The Isthmus of Panama joined with the North America and South America. The Bering Strait separates North America from Asia.

Political Division

North America is the third largest continent next to Asia and Africa. North America has three large countries and several smaller ones. Canada is the largest country of North America followed by the United States of America and Mexico. The seven small countries which lies to the south of Mexico are referred to as central America. These include Nicaragua, Honduras, Guatemala, Panama, Costa Rica, El Salvador and Belize.

DO YOU KNOW?

Isthmus : A narrow stretch of land joining two large land masses.

Strait: A narrow stretch of water joining two large water bodies.

Political division of North America

Physiography

North America is a continent of great physical diversity. Mount McKinley is about 6194 m above the sea level and is the highest peak. In North America death valley is about 86 m below the sea level and is the lowest part of the continent of North America. It has some of the oldest and the youngest rocks in the world. On the basis of physiography North America can be classified into four major physical divisions:

1. The Rocky Mountains,
2. The Great Plains,
3. The Appalachian Highlands and
4. The Coastal Plain.

1. The Rocky Mountains

The western part of the continent is occupied by long ranges of young folded mountains interspersed with high plateaus, narrow valleys and broad interior basins. This mountain range extends for about 4800 km from Alaska in the North to the Panama Strait in the South. The width varies from 110 to 480 Kms. They are consists of parallel ranges and are known as the Rockies in the east and the Coast Range Mountains in the west. The Sierra Nevada is a mountain range in the Western United States lies between the Central Valley of California and the Great Basin. In Mexico, they are called Sierra Madre. The Rockies and the Coast Range are together is known as "Western Cordilleras". There are high intermontane plateaus lies between these ranges. Such as the Mexican plateau, the Colorado Plateau and the Columbian plateau.

DO YOU KNOW?

The Cordilleras are also part of the Fire Ring of the Pacific because there are a number of active volcanoes and this area is also subject to earthquakes.

Physiography of North America

DO YOU KNOW?

Highest peaks in different continents:

- **Asia:** Mount Everest (8848 meters)
- **South America:** Mount Aconcagua (6961 meters)
- **North America:** Mount McKinley (6194 meters)
- **Africa:** Mount Kilimanjaro (5895 meters)
- **Europe:** Mount Elbrus (5642 meters)
- **Antarctica:** Mount Vinson Massif (4,892meters)
- **Australia:** Mount Kosciuszko (2,228 meters)

The Great Plains

To the east of the Rockies and the west of the Appalachian Mountains lies the great plains of North America. It covers about three - fifth of the continent. This plain stretches from the Arctic Ocean in North to the Gulf of Mexico in the South and from the Appalachian Highlands in the east to the Rockies in the west. The western part of the plains is called the High Plains spreading roughly over the foothills of the Rockies. Most of the rivers of this region have their source in the Western Highlands and the plains generally slope eastwards and southwards. They are drained by rivers like the Mississippi and the Missouri.

The Appalachian Highlands

The Appalachian Highlands do not form a continuous chain like the Western Highlands (The Rockies). These Highlands are low and wide. They have a very few peaks more than 1800m. They include the High Plateaus of Greenland, Labrador or Laurentian Plateau in Canada and the Appalachian Mountains in the United States. These old fold mountains are worn down by weathering and are much lower than the Western highlands. This region is rich in mineral reserves like coal, iron ore, copper etc., which play a vital role in the North American economy.

The Coastal Plains

The coastal plains of North America are the youngest in age. Most of the Atlantic Plain has been drowned (lies underwater). This is low and relatively plain area with sandy soil which is infertile in nature. Here swamps and marshes are abundant and the coast is indented by river mouths and bays on which many important seaports are located.

Drainage

Many rivers flow across this land and some of them following the valleys are formed by the glaciers. The Mississippi and Missouri rivers are the longest rivers in North America and together they form the fourth longest river system in the world and stretching more than 6114 km from Montana to Gulf of Mexico. After 3700km running the Missouri river joins the Mississippi river. The Mackenzie River is the second largest drainage basin of North America. It has it source from Great Slave Lake and drains into Arctic Ocean.

St. Lawrence has its origin in Lake Ontario which flows north east and drains into the Atlantic Ocean. The plateau of the west has been cut deeply by the River Columbia and its tributary which forms many Gorges called Canyons. The most famous is the Grand Canyon cut by the river

Colorado which all flows over the plateau of Columbia. These rivers form a barrier to communication but whose water has been dammed for irrigation and power. The River Yukon rising in the north-west of the Western mountain system is frozen for eight months in the year. The River Rio Grande flows into the Gulf of Mexico and forms the boundary between USA and Mexico.

Grand Canyon is a steep-sided Canyon carved by the Colorado River in Arizona State of USA

Numerous lakes are found in the glaciated parts of the continent and especially in North Minnesota. These lakes are small and they are used for recreational purposes. The Great Lakes are formed across the continent from west to east. The most important chain consists of five lakes. The biggest is Lake Superior and it is the largest freshwater lake in the world. Lake Winnipeg, Great Bear Lake and Lake Athabasca are some of the other lakes in Canada.

Mississippi River

The Mississippi river has been given the nickname "The Big Muddy" because it erodes a lot of sand and mud on its passage.

Some of the States in United States of America are named after the tributaries of these two mighty rivers the Mississippi and Missouri.

Climate

The vast latitudinal extend from the Tropical region to the Polar Regions makes the climate of North America as varied as that of Asia. Unlike the Himalayas, the Rockies run north to south which do not act as a climatic barrier and can not prevent the icy winds from the Arctic region. So the cold winds penetrating the central plains which therefore have a very long cold winter and very short hot summer. Precipitation occurs due to cyclonic storms. The Arctic region is cold and mostly dry and has a very short summer and a very long bitterly cold winter. As one proceeds southwards the short summer becomes warm but the winter is very cold. The central plains had extreme climate. Freezing conditions in winter and tropical heat in summer.

The South is usually warm all the year round and the regions around the mouth of the Mississippi-Missouri and the Gulf Coast have summer rain from the North East Trades which blow on-shore in summer. The warm moist South Westerlies not only bring rainfall to the North West coast and also keep it warm. The warm Alaskan Current keeps the North West coast ice free. The State of California in USA has a Mediterranean Climate with moist winter and dry summers.

> **DO YOU KNOW?** The **Westerlies or Anti-trades** are prevailing winds from the west toward the east in the middle latitudes between 30° and 60° latitude.

Natural Vegetation

North America is endowed with a diverse and extensive forest cover. Approximately 30 percentage of the total land area is under forest cover. Lumbering is a well developed industry particularly in Canada. North America is a major producer of timber, plywood, wood pulp and paper. It accounts for approximately 20 percent of the world's production of timber. This diversity is brought about primarily because of the different latitudes and variations in altitude, soil and precipitation.

Forest, Flora and Fauna of different regions of North America

S. No.	Types of forest	Climate	Region	Flora	Fauna
1	Tundra	winter is long and severely cold, Summer is short and cool. Rainfall is scanty.	northern coast of Canada and Northern Islands	Mosses, lichens and Dwarf willows	Arctic Fox, Reindeer, Musk Ox, Polar Bears, Wolverin, Sable and Blue Fox
2	Taiga or the Cold temperate Coniferous Forest	winter is very cold, Summer is warm and short. Heavy snowfall during winter	south central Alaska and north eastern Canada	Pine, Fir, Cedar and Spruce	Beaver, Fox, Sable, Ermine, Skunk, Caribou Moose, Elk, Black Bears and Grizzly Bears.
3.	Temperate Prairie Grasslands	winter is very cold, Summer is hot and rainfall is moderate.	central USA and Central Canada	Grasses shrubs, herbs	Coyote, Gophers, Rabbits, Prairie Dogs and Bison
4.	The Mediterranean type	hot summer and, cool winter.	western Coastal margin and Southern California	Olive, Grapes Orange, Cork, Oak, Walnut and Fig	Not much wildlife is found here

5.	Desert Type	winter is cool and summer is hot. The rainfall is very little	southwest USA, Northern Mexico desert	Cactus, Saguaro Cholla Cacti and yucca	Desert Fox, Gazelles, Scorpions, Lizards and Rattle Snakes
6.	Cool Temperate Deciduous Forests	summer is hot winter is mild and moderate rainfall.	florida, Gulf Coast southeast USA	Chestnut, Oak, and Poplar, Cypress	Foxes, Squirrels, Deer, Raccoon Rabbits, and Musk Ox
7.	The Tropical rain forests	Temperature and rainfall varies on the basis of height.	southern Mexico, Central America and West Indies	Palms, Logwood, Mahogany, Rubber and Cacao Trees	Monkeys and Snakes
8..	Mountain Forests	temperature falls with rise in attitude. The rainfall received on the slopes varies.	rockies Mountain	Pine, Fir, Mosses and Lichens	Deer and Bear

Bison

Raccoon

Rattle Snake

Musk Ox

Natural Regions of North America

Agriculture

Though least proportion of the total workforce is engaged in agriculture. America's agriculture is most productive in the world. Extensive agriculture system is practiced in Canada and USA. Both Canada and USA are the major exporter of wheat than the other countries of the world. Wheat, Corn (Maize), Oats, Soybean, Barley and many other food crops are grow well in the vast interior plains.

Wheat

Wheat was introduced by European settlers in North America. It is grown extensively in the Prairies of North America. North America is the largest exporter of wheat. Vast wheat producing areas are called wheat belt.

Maize

It is the native food crop of North America which is the main staple food grains in Mexico. It is grown in southern Prairies. North America produces more than half of the world total Maize.

Barley and Oats

These are temperate crops which withstand cold climate and less water. Barley is grown in the United States and are produced in Minnesota, North Dakota and Washington. Barley and Oats are used as cattle fodder.

Cotton

Cotton grows well in Southern and Western States and it is dominated in Texas, California, Mississippi, South of the Prairies and the Mexico. Warm summer with frequent rainfall and fertile soil are favourable conditions for growth of cotton crop.

Agriculture of North America

Sugar cane

Sugar cane is cultivated along the Gulf of Mexico, Parts of Central America and West Indies. It is an important Cash Crop of West Indies. Cuba

is known as the "sugar bowl of the world" and it is the world's largest exporter of sugar.

Soya beans

It is raised in the same area where Maize is grown. It is used for extraction of edible oil.

Potatoes and Sugar beet

Prairie Region, North Dakota and Minnesota are the producers of Sugar Beets and Potatoes. Sugar beet is used for making Sugar. Potato and Sugar Beet are used to feed cattle and pigs.

Fruits

Mainly Citrus fruits are cultivated in Texas, California, Great Lakes regions and St. Lawrence Valley. The important fruits of North America are Cranberries, Blueberries, Concord Grapes, Strawberries, Gooseberries and the other fruits.

Cattle rearing

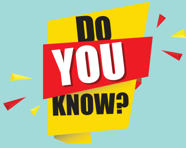
Cattle rearing are carried on a commercial scale in the drier parts of the Prairies in the South Western part of the United States. Vast herds of Cattle and Sheep are kept on large Ranches. Richer pastures are used for cattle and poorer sparse pastures are used for sheep. North America is the largest producer of meat and about one fourth of the world production.

Dairy farming

Dairy farming refers to rearing cattle for milk. It is an important industry of USA and Canada. Dairy farming is found in the cooler and humid part of the Prairies, Great Lakes areas and north east region along the Atlantic coast. North America produces about 25 percent of the world total milk and dairy products.

Fisheries

Fishing is locally important in the seas around the continent. The Grand banks is one of the world's best fishing grounds. It is located in the island of Newfoundland in Canada. Here the meeting of Cold Labrador current and Warm Gulf Stream current provides suitable condition for fish to thrive. The cold Labrador Current brings plenty of plankton which provides food for fish. Cod, Herring, Mackerel, Salmon and Halibut are the major varieties of fish in North America.



Grand Banks: The Grand Banks is among the world's largest and richest resource areas, renowned for both their valuable fish stocks and petroleum reserves.

Minerals

North America has rich mineral resources. North America is the leading producer of Iron Ore, Petroleum, Natural Gas, Copper, Silver, Sulphur, Zinc, Bauxite and Manganese. Lead and Uranium are the other important minerals. North America has vast deposit of Oil and Natural Gas. The United States, Canada and Mexico are among the world top Oil producers.

Minerals of North America

Important Minerals in North America

Mineral	Area
Iron Ore	Canadian shield, Great Lake region, Appalachian Highlands, central Alabama, Minnesota's
Copper	Great lakes, Arizona, Utah, New Mexico, Nevada, Montana and Rockies mountains, Ontario, British Columbia
Silver	Nevada, Utah, British Columbia, Ontario, Quebec.
Gold	Canada –Ontario, Quebec USA – California, Colorado, Utah, Nevado.
Coal	Appalachians, Pennsylvania, Ohio,Alabama,Alberta and Columbia.
Petroleum	USA – Alaska to Texas Canada, Mexico
Oil and Natural Gas	Central low lands, Gulf coast Rockies, Appalachian, Alaska

Industries

North America has plenty of resources and is needed for industrial development. Industries are highly concentrated in the north eastern part of the continent because of large minerals deposits like coal, iron ore etc., and good transportation network like roads, railways and canals. The United States is one of the most industrialized countries in the world. Industries contribute about 25% of Gross National Product. The United State ranks first in Iron and Steel industry. They use the latest technology in developing their industries.

Major industries in North America

1. Iron and Steel Industry

The North American continent is the world's most important Iron and Steel industrial centre. Iron and Steel industries require Iron Ore, Coal and transportation. The important centres of the Iron and Steel industries in North America are Pittsburgh, Chicago and Birmingham in the United States and Hamilton in Canada.

2. Heavy Engineering Industries

Industries which require heavy and bulky raw materials using enormous amounts of power, involvement of huge investment and large transport costs are called heavy Engineering industries. These industries depend heavily on the Iron and Steel industry. The important Heavy Industries are automobile industries, aircraft industries, ship building industries, Railway Wagon industries and farm equipment industries. The USA is the largest producer of automobiles. The important Centres of heavy engineering industries are Detroit, Chicago, Buffalo, Indianapolis, Los Angeles, Saint Louis, Philadelphia, New York, Baltimore, and Atlanta in USA and Windsor in Canada.

3. Wood Pulp and Paper Industry

About 50 per cent of the world's wood pulp and newsprint is produced by North America. Canada is the largest producer and exporter of all kinds of paper in the world. Paper industries are particularly concentrated in Ontario in Canada.

4. Textiles Industry

The textiles industry includes the manufacturing of all textiles like cotton, woolen, and synthetic. The United States is the largest producer of Cotton Textiles. The industries are mainly located in Texas. California, Arizona, Mississippi, Arkansas, and Louisiana. Toronto, Cornwell and Kingston are the major centres in Canada. Moreover, the cool and wet climate of the area is most suitable for spinning and weaving, as the yarn does not break frequently. The Woolen Textile industries are located in the east of the Alleghany Plateau. The New England region contains 70% woolen textile industries. North America is the second largest producer of synthetic fibers. Rayon and other synthetic fibers are made up of cellulose obtained from wood Pulp.

5. The Meat - Packing Industry

This is an important industry in Canada and USA where cattle rearing is done on a large scale in the Prairies. Chicago, Kansas City, Saint Louis in the United States and Calgary and Winnipeg in Canada are the important meat-packing centres.

Population

Most of the people in North America are descendants of settlers from other parts of the World. The first among them were, the Europeans, arrived in the 16th century. Today, the small groups of Native Americans that remain have their own territories and followed a traditional way of life.

Population distribution

The current population of North America as 364,446,736 in the year 2018. North America has about 4.77 % of the total world's population. The largest country by land area is Canada. The largest city by population is Mexico City. The population density is about 20 persons per Sq. km.

Population and Density of North America

S. No.	Country	Population (in Millions)	Density
1.	United States	327.16	30 persons
2.	Canada	36.95	3 persons
3.	Mexico	123.00	51 persons

Densely populated areas: Eastern part of North America, Great Lakes region, Florida, California, Mexico and Central America are the mostly densely populated areas.

Moderate populated areas: Central part of United States, Central Highland, Highlands of Mexico, Central and western Canada are the Moderate populated areas.

Sparsely populated areas: Northern Canada, Alaska, Rocky Mountain regions and desert regions are sparsely populated areas.

Languages and Religions most of the people speak English, Spanish and French. Various faiths have been a major influence of culture, philosophy and law. Between them 80% of the people follow Christianity. United States of America is known as "Melting Pot"

where hundreds of different cultures meet, blend and creating a new culture.

Eskimos live in the very cold and inhospitable region where plenty of fish varieties are available. They were able to dress themselves in thick warm clothes made of fur, they live in igloos.

Eskimos

Igloos

Their lives were very simple and they could not alter the environment to any extent. They specially designed a house by ice and is known as igloos.

Transport

North America has developed a well-designed network of roadways (freeways) railways, waterways and airways.

A) Roadways

North America especially USA and Canada have the best laid roadways in the world. They are made of Asphalt and Concrete roads can be used in all weather conditions. The Super Ways (or) Free ways make travelling easy and fast. The Pan American highway runs from Alaska in the far North west to Panama in the south.

B) Railways

North America is extensively served by an efficient network of railway. Tarns-Continental railways and Tarns-Canadian railways are link the east and west coast of Canada and United States. Chicago has the biggest railway junction in the world. The New York railway junction is one of the busiest railway stations in the world.

C) Waterways

The Great Lakes region along St. Lawrence and Mississippi rivers are the most important inland waterway in North America. Quebec City, Montreal, Boston, New York, Philadelphia, Charleston and New Orleans are some of the important inland ports. New York is the most important port along the East coast. Vancouver and San Francisco are important ports on the West Coast of North America.

DO YOU KNOW?

Panama Canal: In 1914 a Canal was cut across the Isthmus of Panama for 80 kms long which connects the Atlantic with Pacific Ocean.

Panama Canal

It greatly reduced the distance between Europe and the West Coast of North and South America.

D) Airways

Airways provide in valuable means of transport. All the cities and industrial centres in North America are linked by airways.

New York, Chicago, Los Angeles, Atlanta, Toronto, Montreal and Mexico City are some of the international airports in North America.

Trade

North America exports a host of agricultural and industrial products. The main exports are Industrial Machinery, Automobile, Paper, Fish, Wheat, Bananas, Meat, Aircraft, Telecom Equipments, Chemical, Plastics, Fertilizers, Wood Pulp, Timber, Crude Oil, Natural Gas, Aluminum, Nickel and Lead. The countries of North America Imports include Coffee Cocoa Sugar, Textiles, Iron ore and Electronics goods. The countries of Europe, Japan, China and India are the major trading partners.

B. South America

Next to Asia, Africa and North America, South America is the fourth largest country in the World. Most of the South American continent lies within the Southern Hemisphere and hence called as the "Southern Continent". The Isthmus of Panama in the North West connects South America with North America.

DO YOU KNOW?

Together with the Central America, South America is also known as Latin America, having been discovered and colonized mostly by the Latin's, i.e., The Spanish and the Portuguese.

Location

South America lies between 12°N to 55°S latitudes and 35°W to 81°W longitudes. The Equator (0° latitude) passes through the mouth of the Amazon River. The Tropic of Capricorn (231/2° S longitude) passes through the Rio de Janeiro in Brazil. South America is inverted triangular shaped landmass. The area of the continent is 17.8 million Sq. Km., which occupies 12 percent of the world's land area.

Political division of South America

Physiography

South America has marked resemblances in structure and relief of North America. South America has some of the oldest and the youngest rocks of the world. On the basis of topographical features, the continent may be divided into the following physiographic divisions:

- ❖ The Andes Mountains
- ❖ The River Basin or Central Plains
- ❖ The Eastern Highlands

Physiographic of South America

The Andes Mountains

The Andes are fold mountains like the Himalayas. This is the longest mountain range in the world and extends for more than 6,440 km along the Pacific Coast. The highest peak in the Andes is Mount Aconcagua (an extinct volcano) in Argentina border which reaches at an elevation of 6,961m. In Chile, the mountains run very close to the coast. The slopes are steep on the western side and gentle on the eastern side like Rockies in North America. The Andes

being a part of the Pacific Ring of Fire these places are subject to great volcanic eruption and earthquake activities. There are some active volcanoes like Mt Cotopaxi (5,991m) on the Andes range. The Andes are rich in minerals like Copper, Tin and Precious Gems including Emeralds.

Mt Aconcagua

Cotopaxi

The River Basins (or) the Central Plains

Nearly half of the Continent is covered by the plains. Three great rivers drain into the Atlantic Ocean. The biggest of them is the Amazon. The Amazon basin consisting mainly of the alluvial deposits is the thickly forested part of the world. It is widest near the Andes and narrowest near the mouth of the Amazon River. The Orinoco basin is separated from the Amazon basin by low interfluves. It is also one of the most productive parts of the continent. The Parana - Paraguay plain is an ancient rocky surface covered with alluvial deposits and is rich in petroleum deposits.

The Eastern Highlands

These are considerably older than the Andes and are mainly Plateau which is cut by many rivers. They lies to the north and south of the Amazon River. The Guiana Highland is located in the northern part of the continent which has a number of waterfalls including the Angel Falls. The Brazilian Highlands are found to the south of the Amazon basin. They are gently rolling plateaus with steep cliffs along the east coast.

Climate

The climate of the continent of South America has been closely influenced by the latitudes, altitudes and the proximity of the Pacific and Atlantic Oceans. It is hot in the Amazon basin as the equator passes through it whereas Quito, situated almost on the same latitude on the Andes, has “Eternal Spring”. That is, it has a pleasant climate throughout the year because of its high altitude at 9,350 feet (or) 2849.88 meter above the sea level. Most of South America regions have its summer from November to January. When it is quite hot in Brazil, Argentina has a relatively cooler climate because of its location in more southerly latitudes.

The rainfall distribution is mainly controlled by the physical features and the distance from the sea. The trade winds bring a lot of rain to the east coast and the Westerlies to the west coast. However, the Amazon basin gets rainfall everyday because of its equatorial location. The regions around the Equator get what is called “4’o Clock

Rains" which are convectional rains. Rainfall decreases towards the interior.

> **DO YOU KNOW?**
>
> In equatorial regions convectional rain occurs almost daily in the afternoons. It generally occurs at 4pm that's why it is known as 4' o Clock Rain.

Drainage

Owing to the position of the Andes all the great rivers of the continent drain into the Atlantic. The Pacific streams are short and swift but along the coastlands of Peru their waters are used for irrigation and to some extent for hydro-electric power. Amazon is the longest river of South America (6,450km) and is the largest river system in the world. This river have over a thousand of tributaries. The rivers Rio Negro, Madeira and Tapajos are important tributaries. At the point where it enters the sea the river is so wide and powerful that it flows even at a distance of 80 km into the high seas. The Orinoco River originates in the Guiana Highlands and flows northwards into the Caribbean Sea. The river Paraguay has the Paraná and Uruguay rivers as the main tributaries which together form and known as the Platte River system. All the rivers are navigable for quite some distance in the interior.

> **DO YOU KNOW?**
>
> Amazon is the greatest river of South America and the largest drainage system in the world in terms of the volume of its flow and the area of its basin.

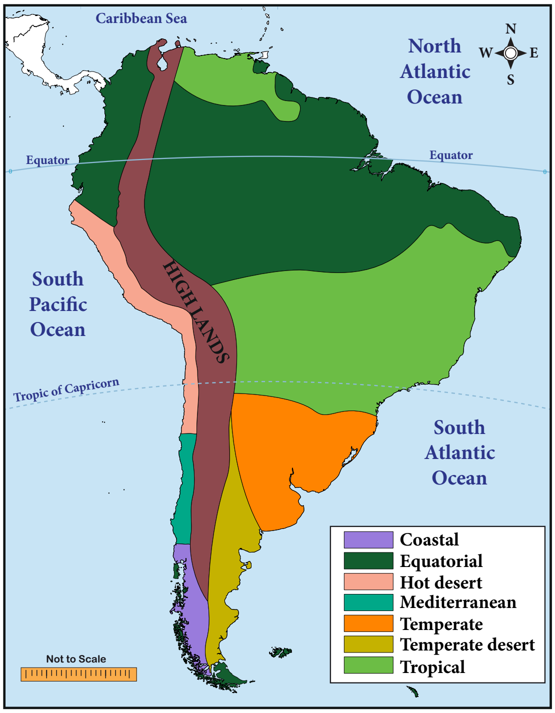
Natural Vegetation

There are four main natural vegetation areas of South America and are the Amazon basin (the Selvas), the Eastern Highlands, the Gran Chaco and the slopes of the Andes. The Selvas of the equatorial regions are called the "lungs of the world". The Amazon rainforest are the largest of their kind in the world. They abound in hardwood trees such as mahogany and Ebony which are very valuable. The other common species are Rosewood Cinchona and a variety of Palm trees. The bark of the cinchona tree is used for making quinine - the drug to cure Malaria. The Amazon rainforest are gradually getting depleted. Various developmental activities such as construction of transportation lines, human settlements and agriculture have led to widespread deforestation. Environmentalist fear that this might lead to serious ecological disturbance in future.

Amazon rainforest

The Eastern Highlands have many varieties of trees which are of economic importance. The leaves of the Yerba Mate tree are used to make you tea - like drink. The Gran Chaco region has thick deciduous forests. An important hardwood tree found in these forests is the Quebracho Tree (axe breaker). Quebracho tree yields tannin which is used for tanning leather. The forests

on the slopes of the Andes have coniferous such as pine, fir and spruce. These forests are also called Montana. They yield valuable softwood for the paper and pulp industry.



Climatic Region of South America

Wildlife

South America is blessed with a variety of wildlife. The dense forests, swamps and rivers of the Amazon basin are particularly rich in different species of animals, birds and reptiles. More than 1,500 types of birds are found in the continent. The Condor is the largest bird prey, Rhea is the flightless bird much like the ostrich of Africa. Toucans, Macaw, Hummingbirds, Flamingoes and different type of Parrots are also found here. The forest is home to a variety of monkeys. The spider monkeys, howler monkeys, owl monkeys and squirrel monkeys are very gentle. The Anaconda which is one of the largest snakes in the world is also found here. Ancient madammals such as anteaters and armadillos are found in South America. Llamas are animals typical found only in South America. The rivers of South America have a rich variety of fish. The Piranha found in the Amazon is a fierce flesh eating fish.

Types of Forest, Flora and Fauna in South America

S. No	Type of Forest	Climate	Region	Flora	Fauna
1.	Equatorial Forest	Hot and wet climate throughout the year	Amazon Basin, North eastern Brazil and Coastal Columbia	Rubber, Mahogany, Ebony, Log wood, Brazil nuts and Ceiba	Anaconda, Armadillo, Piranha, Monkey, Snake, Crocodile and Parrots.
2.	Temperate Forest	Mild and wet climate throughout the year	Southern Brazil, Southern Chile, Brazilian Highlands, Paraguay and Uruguay	Beech, Conifers, Parana Pines and Quebracho	White tailed Deer, Rraccoons, Opossums, Porcupines and Red Fox.

3.	The Mediterranean	Summer is hot and dry, Winter is mild and wet	South Atacama desert, Central Chile	Thorny Shrubs, Cactus, Evergreen Laurel and Acacia	Not much wildlife is found here.
4.	The Savanna Grassland	Summer is hot and Moist, winter is cold and dry	Guiana Highlands, Brazilian highland, Northern Argentina and Paraguay	Tall coarse grass and Acacias	Capybara, Marshy Deer, White-bellied and Spider Monkey
5	The Pampas Grassland	Summer is quite warm, Winter is cold and moderate rainfall	North Eastern part of Argentina, Uruguay and Southernmost Brazil	Short grass	Rhea, Pampas Deer, Jaguar, Guanaco, Camel, Mule and Stag
6.	The Desert	Summer is hot and winter is cold	Southern Argentina, Atacama desert, Southern Peru, Northern Chile and Northeast Brazil	Scrubs, Cactus, Scrubs, Cactus, Cacti, Lichens and Acacia,	Geckos and Iguana

Rhea – Flightless bird

Llamas

Agriculture

More than half of the people of South America live by farming. Subsistence farming is practiced in this continent. Most of areas are covered by forest like the Amazon basin. Only three countries,

the Argentina, Uruguay, and Brazil have well developed agriculture. Argentina is one of the leading agricultural countries of South America. The agricultural activities are mainly concentrated in the wet Pampas. The Geo - climatic condition of Pampas are ideal for agriculture. Wheat and Maize are grown on extensive forms in the Argentine Pampas. In the piedmonts of Andes, where rivers descend and the climate is favourable, the farmers concentrate on the agricultural vineyards and other citrus fruits. Cash crops like coffee, cocoa, sugarcane, banana, cotton etc., are also grown in this continent.

Wheat

The major wheat producers are Argentina, Brazil, Paraguay, Uruguay and the Chile. The Wheat is grown extensively on the Pampas of Argentina. Argentina is one of the largest producer and exporter of wheat in the world.

Sugarcane

Sugarcane has been cultivated in the humid tropics of South America. Spanish and Portuguese introduced sugarcane to the West Indies and Brazil. Brazil is the largest producer of sugar in South America.

Maize

Maize is also known as corn. Maize is grown in the warmer part of the Pampas and coastal regions of Brazil and in some parts of the Amazon basin. It requires warm climate and frequent showers in summer. Argentina is one of the largest producer and exporter of maize in the world.

Coffee and Cocoa

Coffee and Cocoa are the most important crops of South America. These crops need a warm temperature with frequent heavy rainfall and well-drained soil. They grow well in the red soil of the Brazilian Highland. Brazil is essentially an agrarian country. Brazil stands first in the production of Coffee and third in Cocoa in the world. Minas Gerais and Sao Paulo are the important Coffee growing areas in Brazil. It is also known as the "coffee pot" of the world. Colombia and Venezuela also grow large quantities of coffee. Coco is also grown in Ecuador and Colombia.

Coffee Plant in South America

Cotton

Cotton is another important cash crop of South America. Warm climate with frequent rainfall provides suitable condition for growing cotton. Cotton is the second most important crop in Brazil. Sao Paulo State produces half of the Country's total cotton. Equator, Venezuela and Peru are the other important cotton growing countries in South America.

Barley, Rye and Oats

These are grown extensively in the Pampas. Barley is a member of the grass family and is a major cereal grain grown in temperate climates. Oats are grown in Argentina, Uruguay, Chile, Andean region, highlands of Bolivia, Ecuador and Peru. In most countries Oats are more important as fodder for livestock in the field.

Animal rearing

Animal rearing is an important activity in South America. The Llanos and Campos in South America are the extensive Tropical Grasslands. Beef cattle are raised in Pampas in Argentina. Here cattles are mainly raised for draught purposes and meat. Llano grassland are found in the basin of Orinoco of Venezuela, Brazil and Columbia. Here most of the cattle are of Criollo breed well suited to the climatic conditions. Cattles are fed on alfalfa and the breeds raised here on large pasturelands known as "Estancias".

Sheep are reared in the drier parts of South America. The temperate grasslands of Tierra Del Fuego and Falkland Islands are well suited for Sheep grazing. Argentina and Uruguay are the important sheep rearing countries. Argentina is one of the largest exporters of beef in the world.

Sheep in South America.

Estancias

The Breeds raised on large pasture lands is known as Estancias. These are divided into several paddocks. Besides this, there are small yards known as corrals where animals are sorted and branded. The owner is the Estanciera who has a number of gauchos.

Fisheries

Peru is one of the world's largest producers of tropical fish. Here the cool Humboldt Current helps to bring plankton, which is the main food for fishes. Commercial deep sea fishing off of Peru's coastal belt of over 3000 km. Peruvian waters normally abound with sword fish, mackerel, yellow fin, pompano and shark. More than 50 species are caught commercially. There are over 40 fishing ports on the Peruvian coast. Paita and Callao are being the most important centers in Peru. Besides coastal fishing inland fishing are also carried out in South America. River Amazon is a great aquarium. As many as 750 varieties of fish inhabit this river.

Minerals

South America is rich in minerals. These mineral deposits are unevenly distributed. South America has many valuable deposits of minerals particularly of iron ore, manganese, petroleum, copper and bauxite. There are some active mines producing silver and gold. The continent has little coal which is still one of the mainstays of industrial economies. Northern Chile has the world's only natural deposits of sodium nitrate an important ingredient of fertilizers.

Iron ore

South America contains about one fifth of the world's iron ore reserves. Brazil and Chile both have massive deposits of iron ore. Brazil has the second largest iron ore deposits in the world after Russia. Brazil is estimated to have about 15% of the world export of iron ore. High grade iron ore has long been mined at Itabira, Minas Gerais and new site in the Carajas.

Manganese

Brazil also has large deposits of Manganese. Manganese ore is mined at Lafaiete, Minas Gerais and in the Northern State of Amapa.

Petroleum

Venezuela is rich in petroleum deposits. Argentina, Colombia, Ecuador, Peru, Chile and Bolivia are the other valuable oilfields. Petroleum is the only mineral produced in substantial quantity. Argentina is almost self-sufficient in petroleum. Venezuela is one of the world's leading producers of oil and largest oil exporter outside the Middle East.

Copper

Chile is the third largest producer of copper in the world. Copper provides over 40% of exports by value. Some of the biggest copper mines of the world are located in Peru. It is found in the Atacama Desert.

Bauxite

Brazil is the third largest bauxite producing country. An important bauxite mining centre is located near the mouth of the Amazon River. Bauxite is used for aluminum production.

Industries

Industries in South America have developed slowly Argentina, Brazil and Chile are the most highly developed industrial countries in this continent. Until World War I, the continent exported most of its mining production and large amount of minerals particularly Petroleum, Copper and iron are still exported. The continent lacks infrastructure (especially transport) which is an essential need for Industrialisation. Railways and the roads could not be developed sufficiently owing to a rugged terrain. The Amazon and the La Plata rivers, provide cheap water transport. In spite of having an abundance of natural resources, industrialisation started quite late in South America. Recently, new industries are being set up with locally available raw materials. Brazil is the most industrialized country in the continent followed by Argentina.

S.No.	Country	Industries
1.	Brazil	Iron and steel, cotton textiles, sugar, food processing, oil refining, chemicals and automobiles
2.	Argentina	Meat processing and Canning, dairy products, food processing, leather processing, woolen textiles, sugar and oil refining
3.	Chile	Oil refining, chemical fertilizers and copper smelting
4.	Peru	Mining and the processing of minerals, chemicals, fertilizers, sugar, coffee and wool textiles
5.	Uruguay	Dairy products, meat processing and woolen textiles
6.	Venezuela	Oil refining, chemical fertilizers and copper smelting

Trade

South America has significant role in the world trade. More than half of the South America's trades are shared by Brazil, Argentina, Venezuela, Peru and Chile. South America's major exports are mostly primary commodities such as sugar, coffee, cocoa, tobacco, beef, corn, wheat, petroleum, natural gas, linseed, cotton, iron ore, tin and copper. South America's products include mostly exported to North America and Europe. It's imports are machinery, vehicles, chemicals, pharmaceuticals, paper are textiles. These are imported from North America and Europe.

Transport

Unlike North America, South America still does not have an adequately integrated transportation network. Significant efforts have been made to improve both the connection within the countries and the linkages between them.

Roadways

South America has an extensive and rapidly expanding network of roads. In many countries, however only a relatively small percentage of roads are paved and the most remote areas, they may be barely wide enough for two Vehicles to pass easily. A Road linking Venezuela and Brazil allows north to south movement through the Amazon Basin. Brazil continues to have the largest network of roads belonging to the Pan American Highway System which extends throughout the America's.

South America- Roadways

Railways

In most South American countries, railways have lost their dominant position of the major mode of transportation and have

been replaced by the road networks that have developed rapidly since the 1960's. Moreover, rail transport is plagued by operational problems as well as by obsolete equipment. Almost all lines are single-tracked which makes traffic slow and discourages passenger service. Many countries have two or more track gauges which impedes the efficient integration of the rails system.

South America- Railways

Waterways

Seaways have long been a vital component of the transport systems of South American countries. Majority of imports and exports to and from the continent are moved by ship. South America has a number of outstanding natural harbours. They are Rio de Janeiro, Salvador, Montevideo and Valparaiso. Several countries such as Chile and Brazil are making a determined effort to develop and enlarge their sea routes.

South America - Waterways

There are two inland waterways system of international importance. They are (i) The Paraguay - Uruguay basin which includes territory in four countries and (ii) The Amazon basin which includes six countries. Each has several thousand miles of navigable waterways.

Airways

Airways have developed rapidly since World War II. The increase is particularly significant with respect to passenger traffic and also handling of bulky freights. All the South America capitals and most of the large cities are linked by direct air services to the major traffic centres of the United States and Europe.

Population

South America contains the world's most mixed population. Many people in South America are descended from European, especially the Spanish and Portuguese, who begin to arrive during the 15th century. The descendants of African slaves brought over by the Europeans. Native people still live in the mountain and the rainforests and keeping their own languages and traditions. There are three major races found in South America and are (i) American Indian, (ii) European and (iii) Blacks. The mixed population of Native Indians and Europeans is known as 'Mestizo'. The mixed population of European and the Blacks is called 'Mulato' and the mixture of Native Indians and Blacks is called 'Zambo'. The current population of South America is 429, 115, 060 (42.25 cores). Population density of South America is 21 persons per square kilometer. South America is positioned 5th rank in total population among the continents.

Population distribution

- **High densely populated** areas are Guiana, Venezuela, Suriname, Columbia, Brazil and Peru.
- **Moderate populated** areas are Paraguay, Chile and Uruguay and
- **Sparsely populated** areas are Argentina, Bolivia and Amazon Basin.

Languages and Religions

Portuguese and Spanish are the primary languages of the South America. Among other languages used by many South Americans are Dutch, French, English, German and Hindi. Christianity is the dominant religion in South America. Other than Christianity, Hinduism and Islam are also followed by South Americans.

DO YOU KNOW?

South American nations have variety of music. Some of the most famous genres include Samba from Brazil, Tango from Argentina and Uruguay and Cumbia from Colombia..

North America and South America

S. No.		North America	South America
1.	Geographical extent	7^0N to 84^0N latitude and 53^0W to 180^0W longitude.	12^0N to 55^0S latitude and 35^0W to 81^0W longitude.
2.	Major countries	Canada, United States of America, Mexico	Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela
3.	Smallest country	Grenada	Suriname
4.	Highest point	Mount McKinley	Lake Maracaibo
5.	Surrounding water bodies	Arctic Ocean, Pacific Ocean, Atlantic Ocean, Gulf of Mexico.	Pacific Ocean, Atlantic Ocean, Caribbean Sea, Southern Ocean.
6.	Major rivers	Mississippi River, Missouri River, Colorado River, Rio Grande, Yukon River	Amazon, Parana, Madeira, Tocantins, Orinoco
7.	Largest lake	Lake Superior	Portuguese, Spanish, Dutch, English, French
8.	Major deserts	Great Basin, Mojave, Sonoran and Chihuahuan deserts	Atacama deserts, Patagonian, deserts

9.	Major animals	Brown bear, bald eagle, humming bird, bullfrog, beaver, red cockaded woodpecker, red fox, bison	Llama, anaconda, anteater, agouti, armadillo and chinchilla
10.	Major crops grown	Maize, wheat, soyabean	Wheat maize, rice, potato
11	Major language spoken	English, Spanish, French	Cerro Aconagua (Andes Mountains)

Wrap Up

- North America is the third largest continent next to Asia and Africa.It is divided into four physical divisions.
- The vast latitudinal extent from the tropics to the Polar Regions makes the climate of North America as varied as that of Asia.
- North America is endowed with a diverse and extensive forest cover. Approximately 30 percentage of the total land area is under forest cover.
- Wheat, Corn (Maize), Oats, Soybean, Barley and many other food crops are grown throughout the vast interior plains of North America.
- North America is the leading producer of Iron Ore, Petroleum, Natural Gas, Copper, Silver, Sulphur, Zinc, Bauxite and Manganese.
- United States of America is known as "Melting Pot" where hundreds of different cultures meet, blend and creating a new culture.
- Next to Asia, Africa and North America South America is the fourth largest country in the World. It is divided into three physical divisions.
- The climate of the continent of South America has been closely influenced by the latitudes, and the proximity of the Pacific and Atlantic Oceans.
- There are four main natural vegetation areas of South America and are the Amazon basin (the Selvas), the Eastern Highlands, the Gran Chaco and the slopes of the Andes.
- Wheat, Sugarcane, Maize, coffee, cocoa, sugarcane, banana, cotton etc., are grown in South American continent.
- South America has many valuable deposits of minerals particularly of iron ore, manganese, petroleum, copper and bauxite.
- Portuguese and Spanish are the primary languages of the South America.

Glossary

1.	Isthmus	A narrow stretch of land joining two large land masses	நிலச்சந்தி
2	Strait	A narrow stretch of water joining two large water bodies	நீர்ச்சந்தி
3.	Cellulose	Obtained from wood Pulp	மரக்கூழ்
4.	Prairies	A temperate grassland of North America	பிரெய்ரி புல்வெளி
5.	Igloos	The specially designed a house by ice	இக்லூ (எஸ்கிமோக்களின் வீடு)
6.	The Pacific Ring of Fire	These places are subject to great volcanic eruption and earthquake activities	பசிபிக் நெருப்பு வளையம்
7.	Selvas	A tract of land covered by dense equatorial forest in the Amazon basin.	மழைக் காடுகள்
8.	Pampas	A temperate grassland of South America	பாம்பாஸ்
9.	4'o Clock Rain	In equatorial regions, convectional rain occurs at 4pm	நான்கு மணி மழை
10.	Estancias	The Breeds raised on large pasture lands	செம்மறி ஆட்டுப் பண்ணை

Evaluation

I. Choose the correct answer

1. The -----------------separates North America from Asia
   a) Bering Strait b) Palk Strait
   c) Malacca Strait d) Gibraltar straits

2. ------------- is known as the "sugar bowl of the world"
   a) Mexico b) USA
   c) Canada d) Cuba

3. ---------------- are the longest rivers in North America
   a) The Mississippi and Missouri rivers
   b) The Mackenzieriver
   c) The St. Lawrence river
   d) The Colorado river

4. --------------is the longest mountain chain in the world.
   a) The Andes b) The Rockies
   c) The Himalayas d) The Alps

5. ---------------- basin gets rainfall every day because of its equatorial location
   a) The Mackenzie b) The Orinoco
   c) The Amazon d) The Paraná

II. Fill in the blanks

1. --------------86m below the sea level is the lowest part of the continent of North America.
2. -------------- is one of the world's best fishing grounds.
3. The highest peak in the Andes is ------------ on the Chile - Argentina border.

4. --------------- of the equatorial regions are called the "lungs of the world".

5. ----------- is also known as the "coffee pot" of the world.

III. Match the following

1.	Mount McKinley	– Tropical forests
2.	Grand Canyon	– The flightless bird
3.	Ebony	– The Colorado River
4.	4'o Clock Rains	– 6194 m
5.	Rhea	– The equatorial regions

IV. Give Reasons

1. The eastern coast of North America particularly USA enjoys mild climate.
2. United States of America is known as "Melting Pot".
3. Though Quito and Amazon basin are in the same latitude Quito enjoys eternal Spring. Whereas Amazon basin is hot.
4. Peru is one of the world's largest producers of tropical fish.

V. Distinguish between

1. The Rocky mountain and the Appalachian mountain.
2. The Prairies and the Pampas grassland.
3. Tundra and Taiga.

VI. Put (√) for the correct option

1. **Assertion (A):** Cotton grows well in southern and western states of North America.

Reason (R): Warm summer with frequent rainfall and fertile soil which provide favourable condition.

a) Both A and R is correct.

b) A is correct and R is wrong.

c) A is wrong and R is correct.

d) Both A and R is wrong

2. **Assertion (A):** Industries in the South America has developed rapidly.

Reason (R): The continent lacks infrastructure (especially transport) need for industrialization.

a) Both A and R are correct.

b) A is correct and R is wrong.

c) A is wrong and R is correct.

d) Both A and R are wrong

VII. Answer the following

1. Name the boundaries of North America.
2. Write a note on Mackenzie River.
3. What type of fruits are cultivated in North America? Name some of them.
4. Give a short note about the lifestyle of an Eskimos.
5. Which are the densely populated areas of North America?
6. Name the physiographic divisions of South America.
7. What is called "4'o clock rains"?
8. Name the flora and fauna of equatorial forest in South America.
9. What is known as "Estancias"?
10. Name the major export of South America.

VIII. Answer the following in a paragraph

1. Give an account of the climate of North America.
2. Describe the Heavy Engineering Industries in North America.
3. Describe the drainage system in South America.
4. Write briefly about the major races in South America.

IX. Map skill

1. With the help of the map given in the text and an atlas, name the seas and bays in North America.
2. Mark the rivers Amazon, Orinoco, Negro, Paraguay, Uruguay on a map of South America.

X. Activity

1. Given below are some important cities with industries placed in brackets. Pick out the correct answer from them.
   a) Pittsburgh (Textile, Iron and steel, Shipping)
   b) Chicago (Meat Packing, Woolen textile, Heavy Engineering)
   c) Ontario (Automobile, Paper, Cement)
   d) Chile (Oil refinery, Sugar, Cotton textile)
   e) Uruguay (Leather processing, Copper smelting, Daily products)
2. Write down the answers to the question given in blocks:
   a) Name the highest peak in South America.

   b) An active volcano in South America.

   c) The combined Parana and Paraguay rives.

   d) The highest falls in the world.

   e) The largest river in the world.

3. Collect pictures of the animals and birds of North America and South America and make a scrap book.

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Unit -2

Map Reading

Learning Objectives

- To know about the maps and scale
- To identify the various types of maps
- To understand the elements of maps
- To learn the legend and signs and symbols

Introduction

Reading of maps will give clear understanding of geographical location, physiographic features like mountains, plateaus and plains, water features – river, lake, ocean etc., and cultural features, such as roads, settlement etc., The maps are meant to be the preserving records of the past which will helps us to understand the past and perceive the future. Maps portraits political boundaries of different countries and states. It helps the students to visually understand the size and shape of various countries, continents etc., Maps clearly refer to the properties that people own and the geographical boundaries.

Maps

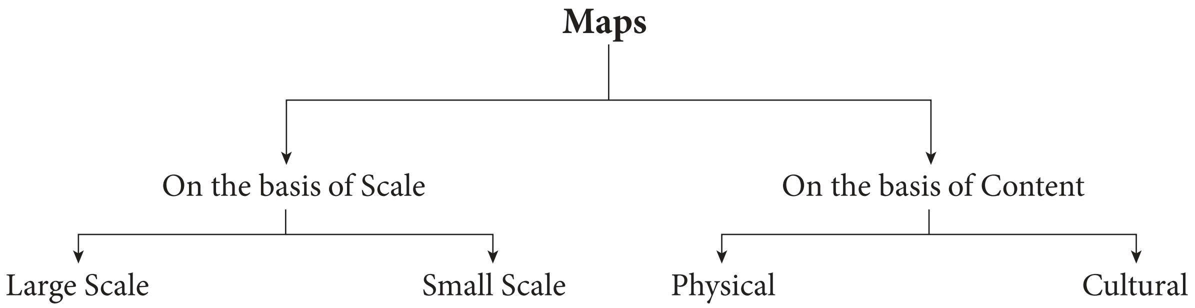
A map is an essential tool of a geographer. Map is a representation of the earth as a whole or a part of the earth drawn on a flat surface according to a given scale. It can show continents, countries, cities and even a local area are drawn with specific details. It is easy to handle and carry as it can be rolled up (or) folded and stored in computers.

DO YOU KNOW?

In the early times, various materials such as animal skin, cloth, parchment, papyrus, wet earth and clay tablets were used to make maps.

Types of Maps

As each map is unique in its design, content and construction. On the basis of certain common features maps can be classified into several types.



Maps on the basis of scale:

Large scale maps show small areas in greater details because they are drawn on a relatively large scale.

- **Cadastral maps** are village and town maps which show individual fields and house sites.
- **Topographical maps** shows smaller areas in much greater details about small area. These maps are prepared by Survey of India. These are also large scale maps which show both natural features like hills and valleys as well as man-made features like buildings, road and canals.

Small scale maps that show large areas like continent or countries. These maps are drawn on 1cm = 1000 kms. These are called small-scale maps.

- **Wall maps** are small-scale maps showing large areas. They are useful for students in classrooms and offices, small scale maps covers a larger area and depicts with limited information.
- **Atlas** is a collection of maps in a book. Atlas maps are small-scale maps covering large areas like continents and countries. Only prominent relief features, main roads and railways important towns are shown in Atlas maps. The study of geographic characteristics of a large area is possible at the time with the help of an atlas.

DO YOU KNOW?

The science of map-making is called cartography (carte means 'map' and graphic means 'drawing').One who draws maps is called a Cartographer.

Types of Atlas

- **School Atlas** contains the maps giving sufficient details of the home and country.
- **Advanced Atlas** contains detailed maps of even small regions of the continents and are used as reference atlases.
- **Regional Atlas** contains detailed maps of small areas, prepared with a view to help in regional planning.
- **National Atlas** contains detailed maps of a country. The maps of a national atlas are comparatively large-sized and they depict general and characteristic features of the geography of a country.

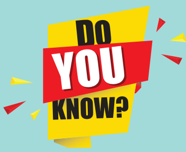
Maps on the basis of content

Physical maps show natural features such as relief, geology, soils, drainage, elements weather, and vegetation.

- **Relief maps** show general topography like mountains valleys, plains, plateaus and rivers.
- **Geological maps** are drawn to show geological structures, rocks and minerals.
- **Climatic maps** show the distribution of temperature, rainfall, clouds, relative humidity, direction and velocity of winds and other elements of weather.
- **Soil maps** which are drawn to show the distribution of different types of soil and their properties.

Cultural maps which shows the man-made features are called cultural maps.

- **Political maps** show the administrative divisions of a country, state or district. These maps facilitate the administration in planning and management of the concerned administrative units.
- **Population maps** show the distribution, density and growth of population, occupation structure and literacy.
- **Economic maps** depict the production and distribution of different types of crops and minerals, location of industries, trade routes and flow of commodities.
- **Transportation maps** show roads, railway lines and the location of railway station, airports and seaports, etc.,
- **Thematic maps** represent the distribution of a particular feature or theme and its spatial variation.



Digital maps is a web-based service that provides detailed information about geographical regions and sites around the world.

Elements of maps

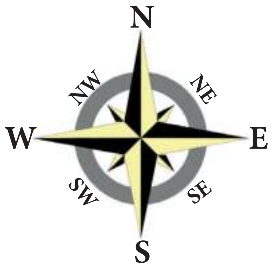
Maps provide us with a lot of information and one must know how to read and interpret them. Every map is provided with certain features that help us to study the information presented in it. The basic essential elements of a map are title, direction, scale and legend (or) key and signs and symbols.

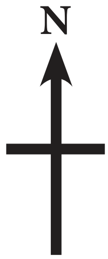
Title

Every map has a title that describes the information given in the map. For example, a map with the title India Rivers shows Rivers of India.

Direction

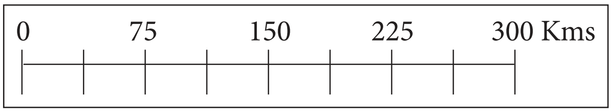
In general maps are drawn with North orientation. It helps us to find other direction on the map like East, West and South. In addition to the North notation, latitudes and longitudes are depicted in the margins. The North is notified by letter 'N' with an arrow mark.





Scale

The scale of a map is the ratio between the distance on the map between two points and actual distance between the two places on the ground. For example the scales can be represented as 1cm = 10km. It means 1cm on the map is equal to 10 km on the ground. It helps to find the distance on the map between two points.



Legend (or) key

A legend or key of a map explains the symbols that are used on it to represent various physical and cultural features. The common signs and symbols which are internationally accepted and used in maps are called conventional signs and symbols. Every map has a legend or a key which explains the different colours and symbols used in it. On a map it is difficult to show the real shape such as settlements, bridges, post offices, railway lines and forests They are depicted by using certain colours, symbols or letters.

India Physical Features

Colours	Features
White	Snow
Yellow	Agriculture
Green	Forest
Blue	Water bodies (oceans, seas and rivers)
Brown	Mountain, Hill and Contour
Red	Settlements, Road
Black	Railway line

Conventional signs and symbols

A sign is a widely used symbol or a line pattern or a colour on a map. It represents a feature on the ground. The Survey of India (SOI) have standardized a set of convectional signs and symbols. Several colours are commonly used in the map.

Symbol	Feature
	Major Road
	Minor Road
	Bridge
RS	Railway Station
	Railway Broad Gauge
	Railway Metre Gauge
	River
	Canal
	Dam
	Lake
	Wetland
	Mountain
	Volcano
	Grass & Shrub
	Forest
	Country Capital
	Internal Administrative Capital
	Temple
PO	Post Office
TO	Telegraph Office
PS	Police Station
	Fort

Uses of Maps

1. Maps enable us to know details of the landforms.
2. Maps help the military personnel to campaigns.
3. It is used in the aero planes and ships.
4. Maps are used for weather forecasting.

Comparison of Map and Globe

Map	Globe
1. A map is a two – dimensional form of the Earth.	1. A globe is three –dimensional model of the Earth.
2. A map shows a small or a large area.	2. A globe is a true model of the earth
3. A map can show a detailed information about an area .	3. A globe cannot show the detailed information for an area.
4. A map is very easy to carry	5. A globe is not easy to carry.

Wrap up

- ❖ Map is a representation of the Earth as a whole (or) a part of the earth drawn on a flat surface according to given scale.
- ❖ Maps classified into two types on the basis of scale and on the basis of content.
- ❖ The basis essential elements of a map are title, direction, scale and legend (or) key or symbol.
- ❖ The cardinal direction are North, South, East and West.
- ❖ The scale of a map is the ratio between the distance on the map between two points.
- ❖ A legend (or) key of a map explain the details in the map.
- ❖ The Survey of India (SOI) have standardized a set of conventional signs and symbols.

Glossary

1.	Map	Representation of Earth on a flat surface	நிலவரைபடம்
2.	Scale	Ratio between the Actual distance of two points on the earth and the distance on a map	அளவை
3.	Legend	It is a representation of different geographical features by using different colours and symbols	குறி விளக்கம்
4.	Relief maps	map that shows the physical appearance of hills, mountains, ridges, valleys, slopes	நிலத்தோற்ற வரைபடம்
5.	Atlas	Collection of several maps	வரைபடம்
6.	Cardinal direction	North, south, east and west are called cardinal direction	முதன்மையான திசைகள்
7.	Thematic map	Represent the distribution of a particular feature.	கருத்துப்படம்
8.	Graduated	Arranged in a series	பகுத்துக் குறியிட்ட அளவு

Evaluation

I. Choose the correct Answer:

1. The science of map making is called ________________.
   a) Geography
   b) Cartography
   c) Physiography
   d) Physical Geography

2. North, South, East and West are four directions are called as
   a) Cardinal   b) Geographical
   c) Latitudinal   d) Angels

3. Cultural maps are those which shows the ______________ features
   a) Natural   b) Man-made
   c) Artificial   d) Environmental

II. Fill in the blanks:

1. ____________________ is an essential tool of a geographer.
2. The directions in between the cardinal directions are the inter mediate _____________.
3. __________in a map which explains the different colours and symbols used in it.
4. Cadastral maps are known as ______________.
5. Small scale maps are helpful to us to show large areas like __________ and __________.

III. Circle the odd one:

1. North East, Scale. North West and East.
2. White, Snow, High land, and Plains.
3. Relief map, Soil map, Physical map and Atlas.
4. Weather Forecasting, Climate, Rainfall and Temperature.

IV. Match the following:

1.	Upper right corner	– Density and growth
2.	Key (or) legend	– District (or) town
3.	Large Scale map	– Natural relief features
4.	Physical map	– Colours and Symbols
5.	Population map	– 'N' letter

V. Examine the Following Statements:

1. An Atlas is a bound volume of different types of maps
2. Atlas maps are drawn on smaller scale
3. Insignificant details are omitted
   a) 1 and 3 are correct
   b) 2 and 3 are correct
   c) 1 and 2 are correct
   d) 1, 2 and 3 are correct

2. **Statement I:** Globe is a three dimensional model of the Earth.
   Statement II: It is easy to handle and to carry. as it can be rolled up or folded.
   (a) Statement I is correct and II is wrong.
   (b) Statement I is wrong and II is correct.
   (c) Both the statements are correct.
   (d) Both the statements are wrong.

VI. Name the following:

1. Representing the earth on a flat surface.
2. Ratio between the distance on a map and distance on the ground.
3. Symbols which help to show road ways and railways.
4. A book which contains different kinds of maps.
5. A map which shows administration divisions.

VII. Answer the following:

1. What is a map?

2. What is cartography?
3. What are cardinal directions?
4. What is an Atlas?
5. Name the types of Atlas?
6. What are the uses of maps?

VIII. Answer in Detail:

1. What are the elements of maps? Write about it?
2. What are the three ways of representation of maps?
3. Classify the maps based on functions
4. Write about comparison of map and Globe
5. Describe the types of maps based on the scale? Write about it?

IX. HOTs

1. Map is an essential tool for a traveller why?

X. Activity:

1. In an outline map of India mark the following features by using symbols and colours
   a) Mark any one of the District capitals
   b) Draw any one river path
   c) Mark any one of the mountains
2. Draw the convectional signs and symbols to given points
   a) Bridge
   b) Canal
   c) Dam
   d) Temple
   e) Forest
   f) Railway Station

References:

1. *Practical Geography* R. L. Singh Practical Geography
2. RP. Misra, A. Ramesh (2002) *Fundamental of Cartography*, published and printed by Ashok kumar Mittal. New Delhi.

Unit -3

Natural Hazards – Understanding of Disaster Management in Practice

Learning Objectives

- To understand the meaning of natural hazards and disaster
- To get familiarise with natural and man made disasters.
- To know about the disaster management and disaster management cycle
- To know several survival techniques

Introduction

Everyday almost all the newspapers and television news channels carry reports on Natural hazards and disasters that occur in several parts of the world. Neither all the hazards nor all the disasters can be preventable but the destruction can be minimized.

For better understanding, we must know, what is a Natural Hazard? What is a Disaster? What is Disaster Management? Let us learn about some important terminologies along with disaster management techniques.

Hazard

Generally, a hazard is a dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury, health impacts, property damage, livelihoods, services, social and economic disruption or environmental damage. Natural hazards are natural phenomenon that might have negative impact on human or the environment. Natural hazards are classified into two broad categories: Geophysical and biological.

Disaster

A disaster can be generally defined as "A serious disruption in the society causing widespread material, economic, social or environmental losses which exceed the ability of the affected society to cope using its own resources". Disaster impacts may include loss of life, injury, disease and other negative effects on human physical, mental and social well-being, together with damage to property, destruction

of assets, loss of services, social and economic disruption and environmental degradation.

Hazards are termed as Disasters when they cause widespread destruction of property and human lives.

Example

Hurricane is a natural hazard. It develops at sea. When it reaches land and destroys buildings and kills people, it can be described as a disaster.

Types of Disasters

	Types of Disaster	Sources	Events
1.	Natural Disaster	Beneath the Earth Surface	Earthquakes, tsunamis and volcanic eruptions
		On the Earth Surface	Landslides and Avalanches
		Meteorological / Hydrological	Windstorms, Tornadoes, Hailstorms and Floods.
		Health	Epidemics
2.	Man-made Disaster	Socio - technical	Technological, Transportations disasters, Structural collapse and production failures.
		Warfare	National and International

Natural Disasters

Earthquake

A sudden movement (or) trembling of the earth crust is called as earthquake. The movement of the tectonic plates, mass wasting, landslides, surface fault, etc., causes earthquake.

Effects

Due to a strong earthquake, loss of lives, buildings, roads, bridges and dams are damaged. Earthquake cause floods, tsunamis, landslides, fires, break down of water supply and electrical lines. It may change the course of a river too.

Effect of Earth Quakes

Recent hazard in India and Tamilnadu

On 2nd to 3rd May 2018 a high velocity dust storms swept across the parts of North India and more than 125 people died and over 200 were injured. In Uttar Pradesh 43 died in the city of Agra and about 30 died other parts of the state. In neighbourhood of Rajasthan state 35 people died and over 200 were injured. The wind downed more than 8000 electricity posts and uprooted hundreds of trees.

After 2004 tsunami, cyclone Gaja is the worst natural disaster to hit Tamilnadu. It left

a trail of destruction in several coastal districts and took a toll on agriculture to a serious extent.

Destruction of Cyclone Gaja

Dust storms swept across the parts of North India

Tsunami

When earthquake jolts the ocean floor, the sudden dislocation of the sea bed occurs and the resulting displacement of water can produce one or more huge, destructive waves, known collectively as a Tsunami. The sea waves rise to several meters and may reach the coast within a few minutes.

Effects

It causes flooding and disrupts transportation, power communication and water supply.

Do You Know?

The word "Tsunami" is derived from the Japanese word. "Tsu" means harbour and "nami" means waves.

Flood

Sudden overflow of water in a large amount caused due to heavy rainfall, cyclone, melting of snow, Tsunami or a dam burst.

Effects

1. Loss of life and property
2. Displacement of people
3. Spread of contagious diseases such as Cholera and Malaria etc.,

Cyclone

A low-pressure area which is encircled by high pressure wind is called a cyclone.

Effects of cyclone

The main effects of tropical cyclone include heavy rain, strong wind, large storm surges near landfall and tornadoes.

Effects of cyclone

"Severe cyclonic storm Gaja crossed the coasts of Tamilnadu and Puducherry around Vedaranyam and Nagapattinam in the early hours of November 10, 2018 Friday with wind speed gusting of around 120 (Kmph)" reported the Indian Meteorological Department.

Effects of Storm Gaja in Nagapattinam

Man-made Disasters

Stampede

The term stampede is a sudden rush of a crowd of people, usually resulting in injuries and death from suffocation and trampling. It is believed that most major crowd disasters can be prevented by simple crowd management strategies. Human stampedes can be prevented by organization and traffic control, such as barriers, following queues and by avoiding mass gathering.

Fire

Fire is a disaster caused due to electrical short circuit, accidents in chemical factory, match and crackers factory.

Fire involves 3 basic aspects

1. Prevention
2. Detection
3. Extinguishing

Forest fire in hilly regions

Fire accidents in Cracker Factories

Public awareness of what to do before fire, during fire and after fire is of critical importance.

Industrial Disaster

Industry faces multiple risks involved with its production, transportation, storage, usage and disposal of the effluents containing residuals and hazardous materials from nuclear and chemical industries.

Example: Bhopal gas leakage

What is Disaster Management?

The systematic process of applying administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster is called Disaster Management.

Disaster Management is necessary or expedient for:

- Prevention
- Mitigation
- Preparedness
- Response
- Recovery
- Rehabilitation

Disaster Management Cycle or Disaster cycle

The six disaster management phases that have been used in the concept of disaster cycle are as follows

Pre – Disaster Phase

Prevention and Mitigation

Reducing the risk of disasters involves activities, which either reduce or modify the scale and intensity of the threat faced or by improving the conditions of elements at risk. The use of the term reduction to describe protective or preventive actions that lessen the scale of impact is therefore preferred. Mitigation embraces all measures taken to reduce both the effects of the hazard itself and the vulnerable conditions to it, in order to reduce the scale of a future disaster.

In addition to these physical measures, mitigation should also be aimed at reducing the physical, economic and social vulnerability to threats and the underlying causes for this vulnerability. Therefore, mitigation may incorporate addressing issues such as land ownership, tenancy rights, wealth distribution, implementation of earthquake resistant building codes etc.

Preparedness

The process includes various measures that enable governments, communities and individuals to respond rapidly to disaster situations to cope with them effectively. Preparedness includes for example, the formulation of viable emergency plans, the development of warning systems, the maintenance of inventories, public awareness and education and the training of personnel. It may also embrace search and rescue measures as well as evacuation plans for areas that may be "at risk" from a recurring disaster. All preparedness planning needs to be supported by appropriate rules and regulations with clear

allocation of responsibilities and budgetary provision.

Early Warning

This is the process of monitoring the situation in communities or areas known to be vulnerable to slow onset hazards, and passing the knowledge of the pending hazard to people harmless way. To be effective, warnings must be related to mass education and training of the population who know, what actions they must take, when warned.

The Disaster Impact

This refers to the "real-time event of a hazard occurrence and affecting elements at risk. The duration of the event will depend on the type of threat; ground shaking may only occur in a matter of seconds during an earthquake. Where as flooding may take place over a longer sustained period.

During Disaster Phase

Response

This refers to the first stage response to any calamity, which include setting up control rooms, putting the contingency plan in action, issue warning, action for evacuation, taking people to safer areas, rendering medical aid to the needy etc., simultaneously rendering relief to the homeless, food, drinking water, clothing etc. to the needy, restoration of communication, disbursement of assistance in cash or kind. The emergency relief activities undertaken during and immediately following a disaster, which includes immediate relief, rescue, and the damage needs assessment and debris clearance.

The Post- Disaster Phase

Recovery:

Recovery is used to describe the activities that encompass the three overlapping phases of emergency relief, rehabilitation and reconstruction.

Rehabilitation: Rehabilitation includes the provision of temporary public utilities and housing as interim measures to assist long-term recovery.

Reconstruction: Reconstruction attempts to return communities with improved pre-disaster functioning. It includes replacement of buildings; infrastructure and lifeline facilities so that long-term development prospects are enhanced rather than reproducing the same conditions, which made an area or population vulnerable.

Development: In an evolving economy, the development process is an ongoing activity. Long-term prevention/disaster reduction measures like construction of embankments against flooding, irrigation facilities as drought proofing measures, increasing plant cover to reduce the occurrences of landslides, land use planning, construction of houses, capable of withstanding the onslaught of heavy rain/wind speed and shocks of earthquakes are some of the activities that can be taken up as part of the development plan.

Let us see in detail about a few disaster management measures that are in practice in India.

Why mitigating the Hazards essential?

It is more cost-effective to mitigate the risks from natural disasters than to repair damage

after the disaster. Hazard mitigation refers to any action or project that reduces the effects of future disasters.

Warning System in India

Department of Science and Technology (DST) Department of Space (DOS) and CSIR Laboratories have set up early warning system for tsunami and storm surges in the Indian Ocean.

Disaster Management in India

National Disaster Management Authority, abbreviated as NDMA, is an agency of the Ministry of Home Affairs whose primary purpose is to coordinate response to natural or man-made disasters and for capacity-building in disaster resiliency and crisis response. NDMA was established through the Disaster Management Act enacted by the Government of India on 23rd December 2005.

The National Disaster Response Force (NDRF) is a specialized force constituted for the purpose of specialist response to a threatening disaster situation or disaster under the Disaster Management Act, 2005.

National Institute of Disaster Management (NIDM) is a premier institute for training and capacity development programs for managing natural disasters in India, on a national as well as regional basis.

Disaster Management in Tamilnadu

- Tamilnadu State Disaster Management Authority (TNSDMA)is responsible for all measures for mitigation, preparedness, response, and recovery are undertaken under the guidance and supervision of the Authority.
- Tamilnadu State Disaster Response Force (SDRF) has been constituted with a strength of 80 Police Personnel. They have been trained in disaster management and rescue operations in consultation with National Disaster Response Force (NDRF).
- District Disaster Management Authority (DDMA) is responsible for Disaster Management at district level

State Disaster Management plan – The perspective plan – 2018 -2030 prepared by the Revenue and Disaster Management Department.

Hot line between Indian Meteorological Department and the State Emergency Operation Centre is established and mitigation in the District is done through telephone, fax and IP phones also available which connect the State with District Head Quarters, Taluks and Blocks of the State. Wireless radio network with both high frequency and very high frequency are also available in the State.

General Survival Techniques

- During the earthquake be under the table, chair, kneel to the floor and protect yourself. Go near a sturdy wall, sit on the floor and hold the floor strongly and protect yourself.
- Use only torch lights.
- During flood forecast, store up necessary things like first aid. Listen to the local Radio / TV for instructions. Cut off all the electrical supplies during flood and earthquake.
- In case of fire accidents dial 101 for fire service.

- If clothes are on fire, "Don't Run; Stop, Drop and Roll".
- Road accidents can be avoided by permitting the persons only who have license are allowed to drive. Learn, preach and practice safety rules during walking and driving along the road.
- Rail Safety Tips: Stay alert. Trains can come from either directions at any time.
- Never sit on the edge of the Station Platform.
- Cross the tracks safely.
- While on boarding the Air craft, pay attention to the flight crew safety demonstration, and read the safety briefing card available in the seat pocket carefully.

Wrap up

- ❖ Both the hazard and the disaster cause enormous physical damage to property and even make huge loss of life.
- ❖ Disaster management refers to conservation of lives and property during a natural or man-made disaster.
- ❖ Preparation, Mitigation, Preparedness, Response, Recovery and Development are the six Disaster management cycles
- ❖ The state and the central government have various disaster management organisations.
- ❖ Earthquake, Tsunami, Flood Cyclone are some of the natural disaster.
- ❖ Fire and Industrial accidents are few man-made disasters.
- ❖ If any accidents occur dial 100 for Police, 101 for Fire service and 108 for the Ambulance
- ❖ If clothes are fire "Don't Run, Stop, Drop and Roll".

Glossary

1.	Hazard	a dangerous event
2.	Disaster	an event which causes enormous damage to property and fife
3.	Vulnerability	severity
4.	Mitigate	reduce (or) make something less severe
5.	Meteorology	forecasting of weather
6.	Trembling	shaking or vibration
7.	Preventive	stop something before it happens
8.	Extinguish	to stop a fire or light
9.	Emergency	a serious, or dangerous situation
10.	Psychological	Mental or emotional state of a person

Evaluation

I. Choose the correct Answer:

1. _____________ is a event which causes enormous physical damage to property, loss of life and change in the environment.

   a) Hazard   b) Disaster
   c) Recovery   d) mitigation

2. Activities that reduce the effects of disaster

   a) Preparation   b) Response
   c) Mitigation   d) Recovery

3. A sudden movement (or) trembling of the earth's crust is called an _____________

   a) Tsunami   b) Earthquake
   c) Fire   d) Cyclone

4. A sudden overflow of water in a large amount caused due to heavy rainfall is called _____________

   a) Flood   b) Cyclone
   c) Drought   d) Seasons

5. Road accidents can be avoided by permitting the persons who have _____________ is allowed to drive vehicle

   a) Ration card   b) License
   c) permission   d) Documents

II. Fill in the blanks:

1. A hazard is a _____________ event that can causes harm or damage to human and his property
2. Activities taken during a disaster is called _____________
3. Displacement of water can produce one or more huge destructive waves known as _____________
4. In case of fire accidents call the nearby police station or the no _____________ for the fire service
5. Disaster management refers to _____________ of lives and property during a natural or man-made disaster

III. Match the following:

1.	Earthquake	– Gigantic waves
2.	Cyclone	– Creak / Fault
3.	Tsunami	– Uneven rainfall
4.	Industrial accident	– Eye of the storm
5.	Drought	– Carelessness

IV. Consider the following statement and tick the appropriate answer

1. **Assertion (A) :** In the modern world we can't live happing everyday.

   Reason (R) : Due to pollution and environmental degradation we are undergoing natural hazard and Disaster

   (a) A and R are correct and A explains R
   (b) A and R are correct but A does not explain R
   (c) A is not correct but R is correct
   (d) Both A and R are in correct

2. **Assertion (A)** Sudden movement (or) trembling of the earth's crust is called an Earthquake Reason (R): Movement of the tectonic plates, mass wasting, surface fault all leads to earthquake

   a) A and R are correct and A explains R

b) A and R are correct but A does not explain R

c) A is in correct but R is correct

d) Both A and R are in correct

V. Answer the following briefly

1. Define Hazard
2. What is disaster ?
3. What are the six concepts of Disaster management cycle
4. Name any two agency which involves in warring system in Tamilnadu
5. Write about any three effects of flood
6. Give any four Rail safety tips
7. Name any four different industry which goes under industrial disaster frequently.

VI. Distinguish between

1. Earthquake and Tsunami
2. Flood and cyclone
3. Hazard and disaster

VII. Answer the following questions in detail

1. Write about disaster management cycle
2. Write about flood its effects and the mitigation
3. Write about any five general survival techniques
4. Write about earthquake, its effects, and mitigation steps

VIII. HOTs

1. Why should we know about the natural disasters?
2. Name four places in India which undergoes land slide .

ICT CORNER

Natural Hazards

To know about Natural disaster in detail through this activity.

PROCEDURE :

Step 1: Open the Browser and type the URL (or) Scan the QR Code.

Step 2: Seismic monitor page will appear on the screen.

Step 3: On the right side of the screen select the place or area.

Step 4 : Click the marked positions to view the detailed explanation about the disaster

Step 1

Step 2

Step 3

Natural Hazard URL: http://ds.iris.edu/seismon/

*Pictures are indicative only

*If browser requires, allow Flash Player or Java Script to load the page.

CIVICS

Unit -1

Women Empowerment

Learning Objectives

- To know the sociological perspectives of gender.
- To understand about various role played by women in society.
- To know the importance of woman's education.
- To understand the role played by women in economic development.
- To understand the idea of women's rights.

Introduction

"Feminism is not about making women stronger. Women are already strong. It's about changing the way the world perceives that strength".

"The story of women's struggle for equality belongs to no single feminist nor to any one organisation but to the collective efforts of all who care about human rights".

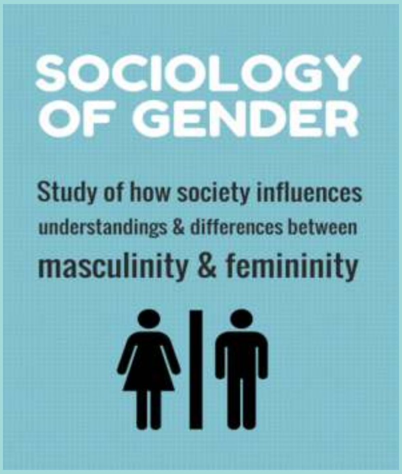
"You educate a man; you educate a man. You educate a woman; you educate a generation".

To call woman the weaker sex is a libel; it is man's injustice to woman –Mahatma Gandhi.

The empowerment and autonomy of women and the improvement of their political, social, economic and health status is a highly important end in itself. In addition, it is essential for the achievement of sustainable development.

Women's empowerment and achieving gender equality is essential for our society to ensure the sustainable development of the country.

Social Aspects of Gender



In sociology, we make a distinction between sex and gender. Sex is the biological trait that societies use to assign people into the category of either male or female. When people

talk about the differences between men and women they are often drawing on sex – on rigid ideas of biology – rather than gender, which is an understanding of how society shapes our understanding of those biological categories.

Gender is more fluid – it may or may not depend upon biological traits. More specifically, it is a concept that describes how societies determine and manage sex categories; the cultural meanings attached to men's and women's roles; and how individuals understand their identities including, but not limited to, being a man, woman, transgender, and other gender positions. Gender involves social norms, attitudes and activities that society views as more appropriate for one sex over another. Gender is also determined by what an individual feels and does.

The sociology of gender examines how society influences our understandings and perception of differences between masculinity (what society views appropriate behaviour for a "man") and femininity (what society views appropriate behaviour for a "woman"). We examine how this, in turn, influences identity and social practices.

The essential factors for empowerment are :

1. **Education:** Education gives one the ability to think wisely and take thoughtful decisions.
2. **Gender Discrimination:** A Society which discriminates between the two genders can never be empowered.
3. Discrimination based on caste, creed, religion etc.

Woman's Education

Education is one of the most important means of empowering women with the knowledge, skills and self-confidence necessary to participate fully in the development process. More than 40 years ago, the Universal Declaration of Human Rights asserted that "everyone has the right to education".

Educating the girl child produces mothers who are educated and who will, in turn, educate their children care for their families and provide their children care and support. The girl child needs to be educated to acquire knowledge and skills needed to advance her status for social interactions and self-improvement.

The sustainability and progress of all regions depend on the success of women across the globe. As the former President Barrack Obama said while addressing the United Nations General Assembly in 2012, "the future must not belong to those who bully women. It must be shaped by girls who go to school and those who stand for a world where our daughters can live their dreams just like our sons."

The Unmatched Importance of Female Education

1. **Increased Literacy:** Of the illiterate youth across the globe, nearly 63 percent are female. Offering all children education will prop up literacy rates, pushing forward development in struggling regions.

2. **Human Trafficking:** Women are most vulnerable to trafficking when they are undereducated and poor, according to the United Nations Inter-Agency Project on Human Trafficking. Through providing young girls with opportunities and fundamental skills, Human Trafficking can be significantly undermined.

3. **Political Representation:** Across the globe, women are under represented as voters and restricted from political involvement. The United Nations Women's Programmes on Leadership and Participation suggest that civic education, training and all around empowerment will reduce this gap.

4. **Thriving Babies:** According to the United Nations Girls' Education Initiative, children of educated mothers are twice as likely to survive past the age of five.

5. **Later Marriage:** As suggested by the United Nations Population Fund, in underdeveloped countries, one in every three girls is married before reaching the age of 18. In a region where a girl receives seven or more years of education, the wedding date is delayed by four years.

6. **Income Potential:** Education also increases a woman's earning capabilities. According to the United Nations Educational, Scientific and Cultural Organisation, (UNESCO) a single year of primary education has shown to increase a girl's wages later in life by 20 percent.

7. **Prospering GDP:** Gross Domestic Product also rises when both girls and boys are being offered educational opportunities. When 10 percent more women attend school, GDP increases by three percent on average.

8. **Poverty Reduction:** When women are provided with equal rights and equal access to education, they go on to participate in economic activity. Increased earning power leads to reduction in poverty level.

Savitribai Phule as a tradition breaker, the first female teacher at the first girls' school. when we talk about the girls' education only Jyotirao Phule is remembered as the champion of women's education in India. He, along with his wife Savitribai Phule, opened the first school for girls in 1848.

First in the World – Woman

First woman	Name	Country
Prime Minister	Sirimavo Bandaranaike	Sri Lanka
In space	Valentina Tereshkova	USSR
To scale Mt Everest	Junko Tabei	Japan
To win the Olympic gold	Charlotte Cooper	England

First in India - Woman
First Women's University Maharshi Karve starts SNDT University in Pune with five students in 1916.
First Women to hold a Union Cabinet post Vijaya Lakshmi Pandit
First Women to hold a Union Foreign Minister's post Sushma Swaraj (2014)
First Women youngest minister of a state Sushma Swaraj (She became the cabinet minister of Haryana when she was only 25 yrs old)
First Women governor of Independent India Sarojini Naidu, in charge of United Provinces
First Women president of UN General AssemblyVijaya Lakshmi Pandit (1953)
First Women Prime Minister of India Indira Gandhi (1966)
First Women IPS Officer of India Kiran Bedi (1972)
First Women to win Nobel Peace Prize Mother Teresa (1979)
First Indian Women to climb Mount Everest Bachendri Pal (1984)
First Indian Women to win Booker Prize Arundhati Roy (1997)
First Women President Pratibha Patil (2007)
First Women Speaker of LokSabha Meira Kumar (2009)
First Women judge in Supreme Court Meera Sahib Fatima Bibi
First Women President of the Indian National Congress Annie Besant
First Women Chief Minister of an Indian State Sucheta Kripalani
First Women Director General of Police (DGP) Kanchan Chaudhary Bhattacharya
First women defencse Minister of India Nirmala Sitharaman
First woman Finance Minister of India Nirmala Sitharaman

Factors Responsible for Poor Female Literacy Rate

1. Gender based inequality.
2. Social discrimination and economic exploitation.
3. Occupation of girl child in domestic chores.
4. Low enrolment of girls in schools.
5. Low retention rate and high dropout rate.

Male Female literacy rate in India: 1951-2011

Census year	Persons	Males	Females	Male-Female gap in literacy rate
1	2	3	4	5
1951	18.33	27.16	8.86	18.30
1961	28.3	40.4	15.35	25.05
1971	34.45	45.96	21.97	23.98
1981	43.57	56.38	29.76	26.62
1991	52.21	64.13	39.29	24.84
2001	64.83	75.26	53.67	21.59
2011	74.04	82.14	65.46	16.68

Role of woman in the economic development

Importance of women's economic empowerment in society is inevitable. Empowerment is one of the main procedural concerns when addressing human rights and development. Women's empowerment and achieving gender equality is essential for our society to ensure the sustainable development of the country.

Benefits of Economic Empowerment of Woman

1. Women's economic empowerment is central to realising women's rights and gender equality.
2. Empowering women in the economy and bridging gender gaps in the world of work are key to achieving the agenda for Sustainable Development
3. When more women work, economies grow.
4. Increasing women's and girls' educational attainment contributes to women's economic empowerment and more inclusive economic growth.
5. It is estimated that companies with three or more women in senior management functions score higher in all dimensions of organisational performance.

The need for Economic Empowerment of Woman.

1. Gender differences in laws affect both developing and developed economies, and women in all regions.
2. Women remain less likely to participate in the labour market than men around the world.
3. Women are more likely to be unemployed than men.
4. Women are over-represented in informal and vulnerable employment.
5. Globally, women are paid less than men.
6. Women bear disproportionate responsibility for unpaid care and domestic work.
7. Unpaid care work is essential to the functioning of the economy, but often goes uncounted and unrecognised
8. Women are less likely to be entrepreneurs and face more disadvantages starting businesses.
9. Women are less likely than men to have access to financial institutions or have a bank account.
10. Women are still less likely to have access to social protection.
11. Violence and harassment in the world of work affects women regardless of age, location, income or social status.

Indian society is known for its unity in diversity. Social inequality also prevails in this society which has given birth of weaker section of society which is as diverse as Indian society itself, women, Scheduled caste, scheduled tribes, children, poor, landless farmers are considered as weaker sections. They have faced socio-economic and political discrimination in hands of dominating section since ancient time and their fight for rights and access to justice is almost as old as the discrimination against these marginalised and weaker group.

Summary

Women empowerment and issues related, nowadays gained its importance worldwide. Personal rights, Social equality, Political power, and Economic opportunity are the important aspects of woman empowerment. World governments, both developed and developing countries are sincerely working towards achieving the goal of Women empowerment. Almost the women population shared 50% of the total population of the world; we can't imagine world peace and prosperity without empowering each and every woman on this planet. It is everyone's responsibility to make each woman into an independent and empowered woman.

Glossary

1.	bully	to hurt or frighten someone, terrorise	பலவீனனைக் கொடுமைப்படுத்துபவர், கொடுமைக்காரர்
2.	trafficking	the act of buying or selling people	மனித கடத்தல், ஆள் கடத்தல்
3.	thriving	very lively and profitable, successful	வெற்றிகரமான
4.	chores	task, duty	வேலை, பணி
5.	retention	the act of retaining something, with holding	தேக்கி வைத்தல், வைத்திருத்தல்
6.	entrepreneur	a person who sets up a business or businesses	தொழிலதிபர்
7.	harassment	aggressive pressure, irritation	துன்புறுத்தல், தொல்லை கொடுத்தல்

Evaluation

I. Choose the correct answer:

1. Which of the following is NOT a consequence of gender inequality?
   a) Poor maternal health
   b) Greater insecurity for men
   c) The spread of HIV/AIDS
   d) Lower literacy rates for women

2. Gender equality is an issue that is relevant to
   a) Girls and women; it's a women's issue
   b) All societies, women and men alike
   c) Third world countries only
   d) Developed Countries only

3. Which of the following strategies will help women become more socially and economically empowered?
   a) Women working together to challenge discrimination
   b) More income sources for women
   c) Improved access to education
   d) All of the above

4. Why are girls more likely than boys to miss out on secondary education in the developing world?
   a) Because of high school fees, only boys are sent to school
   b) Girls are expected to help out at home
   c) Child Marriage restricts girls mobility and freedom
   d) All of the above

II. Fill in the blanks:

1. Jyotirao Phule is remembered as the champion of women's education in India. He, along with his wife______________, opened the first school for girls in 1848.
2. _____________is the first Woman to hold a Union Foreign Minister's post.
3. _____________is the first Woman Director General of Police (DGP)
4. __________is the first Indian Woman to win Booker

III. Match the following:

1.	Sirimavo Bandaranaike	England
2.	Valentina Tereshkova	Japan
3.	Junko Tabei	Sri Lanka
4.	Charlotte Cooper	USSR

IV. Consider the following statements:

1. **Tick the appropriate answer:**

   Assertion : Now women are being integrated at all steps of humanitarian operations.

   Reason: Women and girls suffer the most from any kind of conflict in the society.

   a) Both, A and R, are true and R is the correct explanation of A

b) Both, A and R, are true but R is not the correct explanation of A
c) If A is true but R is false
d) If A is false but R is true

2. **Assertion :** Violence against women cuts across caste, class, religion, age and even education.

   Reason: Domestic violence is manifested in the form of foeticide, infanticide, dowry murder, marital cruelty, battering, child abuse etc.

   a) Both, A and R, are true and R is the correct explanation of A
   b) Both, A and R, are true but R is not the correct explanation of A
   c) If A is true but R is false
   d) If A is false but R is true

V. Answer the following questions:

1. Discuss about various roles played by woman in Society
2. What is gender equality?
3. Explain woman's right.
4. List out the essential factors of woman empowerment
5. Write an essay on importance of woman's education

VI. Activity:

1. Prepare an album about top ten Women achievers of different fields of Tamilnadu?

Unit - 2

Market and Consumer Protection

Learning Objectives

- To identify four different types of market structures.
- To know the differences between each type of market structure.
- To understand why consumers need protection.
- To understand the rights of consumers.

Introduction

When we talk about a market we generally visualise a crowded place with a lot of shops and consumers. People are buying different types of goods like groceries, clothing, electronics, etc in the market.

And the shops are also selling a variety of products and services as well. So in a traditional sense, a market is where buyers and sellers meet to exchange their goods and services.

But what is a market in economics? In economics, we do not refer to a market as a physical place. Economists described a market as coming together of the buyers and sellers, i.e. an arrangement where buyers and sellers come in direct or indirect contact to sell/buy goods and services. For example, the market for books will constitute all the sellers and buyers of books in an economy. It does not necessarily refer to a geographic location.

A set up where two or more parties engaged in exchange of goods, services and information is called a market. Ideally a market is a place where two or more parties are involved in buying and selling. The two parties involved in a transaction are called seller and buyer. The seller sells goods and services to the buyer in exchange of money. There has to be more than one buyer and seller for the market to be competitive.

Features of a Market

In economics, the term market refers to the shops for one commodity or a set of commodities. For example a market for rice, a market for cloth, a market for electronics goods, etc.

1. A market is also not restricted to one physical or geographical location. It covers

a general wide area and the demand and supply forces of the region.

2. There must be a group of buyers and sellers of the commodity to constitute a market. And the relations between these sellers and buyers must be business relations.
3. Both the sellers and buyers must have access to knowledge about the market. There should be an awareness of the demand for products, consumer choices, and preferences, fashion trends, etc.
4. At any given time only one price can be prevalent in the market for the goods and services. This is only possible in the existence of perfect competition.

Classification of Markets

Broadly there are two classifications of markets – the product market and the factor market. The factor market refers to the market for the buying and selling of factors of production like land, capital, labour, etc. The other classification of markets are as follows,

I. On the Basis of Geographic Location

Local Markets: In such a market the buyers and sellers are limited to the local region or area. They usually sell perishable goods of daily use since the transportation of such goods can be expensive.

Regional Markets: These markets cover a wider are than local markets like a district, or a cluster of few smaller states

National Market: This is when the demand for the goods is limited to one specific country. Or the government may not allow the trade of such goods outside national boundaries.

International Market: When the demand for the product is international and the goods are also traded internationally in bulk quantities, we call it as an international market.

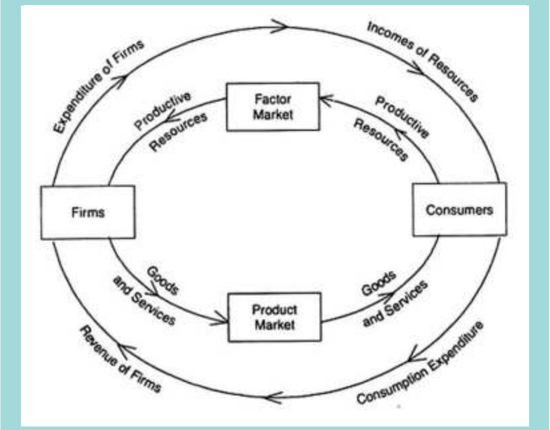
II. On the Basis of Time

Very Short Period Market: This is when the supply of the goods is fixed, and so it cannot be changed instantaneously. Say for example the market for flowers, vegetables. Fruits etc. The price of goods will depend on demand.

Short Period Market: The market is slightly longer than the previous one. Here the supply can be slightly adjusted. Example:

Long Period Market: Here the supply can be changed easily by scaling production. So it can change according to the demand of the market. So the market will determine its equilibrium price in time. Example:

III. On the Basis of Nature of Transaction



Spot Market: This is where spot transactions occur, that is the money is paid immediately. There is no system of credit.

Future Market: This is where the transactions are credit transactions. There is a promise to pay the consideration sometime in the future.

IV. On the Basis of Regulation

Regulated Market: In such a market there is some oversight by appropriate government authorities. This is to ensure there are no unfair trade practices in the market. Such markets may refer to a product or even a group of products. For example, the stock market is a highly regulated market.

Unregulated Market: This is an absolutely free market. There is no oversight or regulation, the market forces decide everything. Example:

V. On the basis of nature of competition

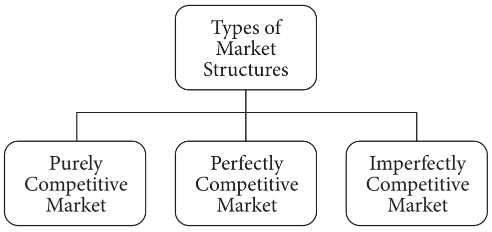


Figure-1: Types of Market Structures

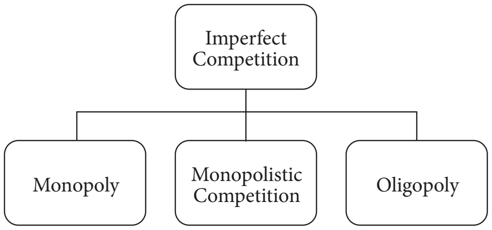


Figure-2: Types of Imperfect Competition

Monopoly:

Monopoly refers to a market structure in which there is a single producer or seller that has a control on the entire market. This single seller deals in the products that have no close substitutes.

Monopolistic Competition:

The term monopolistic competition was given by Prof Edward H. Chamberlin of Harvard University in 1933 in his book Theory of Monopolistic Competition. The term monopolistic competition represents the combination of monopoly and perfect competition. Monopolistic competition refers to a market situation in which there are a large number of buyers and sellers of products. However, the product of each seller is different in one aspect or the other.

Oligopoly:

The term oligopoly has been derived from two Greek words, Oligoi means few and poly means control. Therefore, oligopoly refers to a market form in which there are few sellers dealing either in homogenous or differentiated products.

1. Who is a Consumer?

A Consumer is a person who purchases a product or avails a service for a consideration, either for his personal use or to earn his livelihood by means of self employment.

The consideration may be:

✓ Paid
✓ Promised
✓ Partly paid and partly promised.

It also includes a beneficiary of such goods/services when such use is made with the approval of such person.

2. Who is not a Consumer ?

A person is not a consumer if he/she:

✓ Purchases any goods or avails any service free of charge;

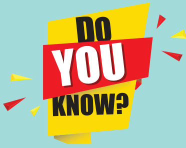
✓ Purchases a good or hires a service for commercial purpose;

✓ Avails any service under contract of service.

What is Unfair Trade Practice?

An "unfair trade practice" means a trade practice, which, for the purpose of promoting any sale, use or supply of any goods or services, adopts unfair method, or unfair or deceptive practice. Some of these practices include:

- False representation
- When goods and services are not of stated standard, quality or grade;
- When second hand, renovated goods are sold as new ones;
- When goods and services do not have the claimed use, usefulness or benefit;
- When products / services do not have the claimed warranty / guarantee;
- When the price of product or service is misleading.
- False and misleading advertisement of selling at bargain price.
- Offering gifts, prizes, etc. to lure customers with no intention of providing them.
- Selling goods which do not fall within the safety standards set up by competent authority.
- Hoardings or destroying goods with the intention of raising the cost of these or similar goods manufactured in greater number so as to manipulate higher prices.
- Manufacturing or offering spurious goods or adopting deceptive practices in the provision of services.



"Goods once sold will not be taken back"
or
"No exchange",
or
"No refund under any circumstances"

It amounts to Unfair Trade Practice and does not carry any legal weight.

Consumer protection

Consumer protection is a group of laws enacted to protect the rights of consumers, fair trade, competition and accurate information in the market place. The laws are designed to prevent the businesses that engage in unfair practices from gaining an advantage over competitors. They may also provide additional protection for those most vulnerable in society. Consumer protection laws are a form of government regulations that aim to protect the rights of consumers. For example, a government may require businesses to disclose detailed information about products—particularly in areas where safety or public health is an issue, such as food.

Consumer protection is linked to the ideas of consumer rights and to the formation of consumer organisations, which helps consumers make better choices in the marketplace and get help with consumer complaints. Other organisations that promote consumer protection include government organisations and self-regulating business organisations.

Example:
Telecom Regulatory Authority of India – **TRAI.**
Insurance Regulatory and Development Authority of India – **IRDAI.**

The Eight Basic Consumer Rights
1. The Right to Basic Needs.
2. The Right to Safety.
3. The Right to Information.
4. The Right to Choose.
5. The Right to Representation.
6. The Right to Redress.
7. The Right to Consumer Education.
8. The Right to a Healthy Environment.

The Consumer Protection Act, 1986 (COPRA)

This Act enacted in 1986 in the Parliament of India to protect the interests of consumers. It makes for the establishment of consumer councils and other authorities for the settlement of consumer's grievances and for matters connected there with it. The act was passed in Assembly in October 1986 and came into force on December 24, 1986.

COPRA is regarded as the 'Magna Carta' in the field of consumer protection for checking unfair trade practices, 'defects in goods' and 'deficiencies in services' as far as India is concerned. It has led to the establishment of a widespread network of consumer forums and appellate courts all over India. It has significantly impacted how businesses approach consumer complaints and has empowered consumers to a great extent.

Consumer Protection Councils are established at the national, state and district level to increase consumer awareness. To increase the awareness of consumers, there are many consumer organisations and NGOs that have been established.

Consumer Disputes Redressal Agencies

National Consumer Disputes Redressal Commission (NCDRC): Established by the Central Government. It deals with matters of more than 10 million.

State Consumer Disputes Redressal Commission (SCDRC): Also known as the "State Commission" established by the State Government in the State. It is a state level court that takes up cases valuing less than ₹10 million.

District Consumer Disputes Redressal Forum (DCDRF): Also known as the "District Forum" established by the State Government in each district of the State. The State Governments may establish more than one District Forum in a district. It is a district level court that deals with cases valuing up to ₹2 million.

Consumer protection Act of 2019

Indian Parliament, in August 2019, passed the landmark Consumer Protection Bill, 2019 which aims to provide the timely and effective administration and settlement of consumer disputes in this Digital Age. The New Act will come into force on such date as the Central Government may so notify. The New Act seeks to replace more than 3 (three) decades old Consumer Protection Act, 1986 (Act).

Highlights of the New Act:

1. **E-Commerce Transactions:** The New Act has widened the definition of 'consumer'. The definition now includes any person who buys any goods, whether through offline or online transactions, electronic means, teleshopping, direct selling or multi-level marketing.

2. **Enhancement of Pecuniary Jurisdiction:** Revised pecuniary limits have been fixed under the New Act. Accordingly, the district forum can now entertain consumer complaints where the value of goods or services paid does not exceed INR 10,000,000 (Indian Rupees Ten Million). The State Commission can entertain disputes where such value exceeds INR 10,000,000 (Indian Rupees Ten Million) but does not exceed INR 100,000,000 (Indian Rupees One Hundred Million), and the National Commission can exercise jurisdiction where such value exceeds INR 100,000,000 (INR One Hundred Million).

3. **E-Filing of complaints:** The New Act contains enabling provisions for consumers to file complaints electronically and for hearing and/or examining parties through video-conferencing.

4. **Establishment of Central Consumer Protection Authority:** The New Act proposes the establishment of a regulatory authority known as the Central Consumer Protection Authority (CCPA), with wide powers of enforcement. The CCPA will have an investigation wing, headed by a Director-General, which may conduct inquiry or investigation into consumer law violations.

5. **Unfair Trade Practices:** The New Act introduces a specific broad definition of Unfair Trade Practices, which also includes sharing of personal information given by the consumer in confidence, unless such disclosure is made in accordance with the provisions of any other law.

6. **Penalties for Misleading Advertisement:** The CCPA may impose a penalty of up to INR 1,000,000 on a manufacturer or an endorser, for a false or misleading advertisement. The CCPA may also sentence them to imprisonment for up to two years for the same. In case of a subsequent offence, the fine may extend to INR 5,000,000 and imprisonment of up to five years. The CCPA can also prohibit the endorser of a misleading advertisement from endorsing that particular product or service for a period of up to one year. For every subsequent offence, the period of prohibition may extend to three years.

Consumer courts in India

National Consumer Disputes Redressal Commission (NCDRC): A national level court works for the whole country and deals compensation claimed exceeds rupees one core. The National Commission is the Apex body of Consumer Courts; it is also the highest appellate court in the hierarchy. The National Consumer Disputes redressal Commission (NCDRC), is a quasi-judicial commission in India which was set up in 1988 under the Consumer Protection Act of 1986. Its head office is in New Delhi. The commission is headed by a sitting or retired judge of the Supreme Court of India.

State Consumer Disputes Redressal Commission (SCDRC): A state level court works at the state level with cases where compensation claimed is above 20 lakhs but up to one core. The State Commission also has the appellate jurisdiction over the District Forum.

District Consumer Disputes Redressal Forum (DCDRF): A district level court works at the district level with cases where the compensation claimed is up to 20 lakhs.

Important Acts

- ✓ The Consumer Protection Act, 1986
- ✓ The Legal Metrology Act, 2009
- ✓ The Bureau of Indian Standards Act, 1986
- ✓ The Essential Commodities Act, 1955
- ✓ The prevention of Black Marketing and maintenance of supplies of essential
- ✓ Commodities Act, 1980

Website of the Department: http://consumeraffairs.nic.in

Website of the NDRC :http://ncdrc.nic.in/

State Commission :http://ncdrc.nic.in/statelist.html

District Forums :http://ncdrc.nic.in/districtlist.html

Summary

❖ Nowadays, consumers are needed to be treated like a King as they bring business to the seller. Previously, consumers needed to be cautious before buying any product, but these days sellers needed to be more cautious before selling any product as due to policies introduced, government laws, consumer protection, NGO and the increased competition in the market. Though the consumers are protected by policies and laws, lack of awareness prevails among the consumers; the need of the hours is consumers are empowered towards their rights and protection.

Glossary

1.	Commodities	trade goods, supplies	வியாபாரப் பொருள்கள்
2.	Prevalent	very common, frequent	எங்குமிருக்கும், வழக்கமான
3.	Cluster	a grouping of a number of similar things, bunch	தொகுப்புக் குழு, திரள்
4.	Instantaneously	immediately, without hesitation	உடனடியாக, கணப்பொழுதில்
5.	Spurious	invalid, fake	போலியான, பொய்யான
6.	Vulnerable	attacked either physically or emotionally, helpless	பாதிக்கப்படக்கூடிய ஆபத்தான
7.	Redress	compensate, remedy, rectify	குறை நிவர்த்தி குறை தீர்க்கும்
8.	Pecuniary	relating to money, financial	பொருள் சார்ந்த பணவகையான

Evaluation

I. Choose the correct answer:

1. In which case a consumer cannot complain against the manufacturer for a defective product?
   a) Date of expiry unspecified
   b) Price of the commodity
   c) Batch number of the commodity
   d) Address of the manufacturer

2. Consumer's face various problems from the producer's end due to
   a) Unfair trade practices
   b) Wide range of goods
   c) Standard quality goods
   d) Volume of production

3. Consumers must be provided with adequate information about a product to make
   a) Investment in production
   b) Decision in sale of goods

c) Credit purchase of goods
d) Decision in purchase of goods

4. The system of consumer courts at the national, state, and district levels, looking into consumers grievances against unfair trade practices of businessmen and providing necessary compensation, is called

a) Three tier system   b) One tier system
c) Two tier system   d) Four tier system

5. Mixing other extraneous material of inferior quality with a superior quality material is called

a) Purification   b) Adulteration
c) Refinement   d) Alteration

II. Fill in the blanks:

1. A set up where two or more parties engage in ________ of goods, services and information is called a market.
2. In regulated Markets, there is some oversight by appropriate_______ authorities.
3. ____________refers to a market structure in which there is a single producer or seller that has a control on the entire market.
4. ______statue is regarded as the 'Magna Carta' in the field of consumer protection for checking unfair trade practices.

III. Match the following:

1.	The Consumer Protection Act	1955
2.	The Legal Metrology Act	1986
3.	The Bureau of Indian Standards Act	2009
4.	The Essential Commodities Act	1986

IV. Consider the following statements:

1. Tick the appropriate answer:

Assertion : In local Markets the buyers and sellers are limited to the local region or area.

Reason: A market is not restricted to one physical or geographical location.

a) Both, A and R, are true and R is the correct explanation of A
b) Both, A and R, are true but R is not the correct explanation of A
c) If A is true but R is false
d) If A is false but R is true

V. Answer the following questions

1. What is market?
2. Describe consumer protection.
3. List out the rights of consumers
4. Discuss about the role of consumer courts.
5. Write about the types of market and its functions.

VI. Activity

1. List out the name and price of ten essential commodities that used in our day today's life.

Unit -3

Road Safety

Learning Objectives

- ❖ Understand the need for road safety
- ❖ Analyze the causes for road accidents
- ❖ List out the safety measures
- ❖ Recognize the roles and responsibilities of government and individuals
- ❖ Know about safety week and traffic signals

Safe driving, Saves lives, Drive fine, Avoid fine

Introduction

The revolutionary invention of the wheel has given rise to modern technologies from transport to machinery. It is one of the most fundamental inventions we use in our daily life. Invention of wheel may be a mystery but the history of vehicles prove the intelligence of man. Can you imagine a world without two wheelers, three wheelers and four wheelers?

Road safety

We have to travel via roads almost every day to go to school, college, office, shops, visit relatives and friends. We need to be safe on the roads. Road safety refers to the methods and measures used to prevent road users. from being killed or seriously injured.

Need for safety on Roads

It is a saddening fact that India is the world's largest contributor to road accidents.

India accounts for about 10% of road accident fatalities at worldwide. Road crashes have a threatening impact on Indian lives, growth and economy.

Causes for Road Accidents

Distracted driving

This is a larger threat and the leading cause for road accidents. It is the distraction of the driver, engaging in any other activity while driving. It may be talking over the mobile phone or texting message or engaging in any activities with attention diverted from driving.

Reckless driving

It is a major traffic violation of rules. It is defined as the mental state in which the driver purposely disregard the rules of the road.

Night driving

An extra alertness is needed while driving at night. The uncontrolled sleep, tiredness due to long drive, poor lighting on the road can cause fatal accidents.

Tailgating

Tailgating refers to a condition where a driver drives behind another vehicle without leaving sufficient distance between them. In this condition, if the vehicle in front of him, stops suddenly, his own vehicle will crash with it.

Heavy Traffic

Increase of vehicles on the road create heavy traffic jam and cause more pollution.

Road conditions

Road expansion is very slow when compared to the expansion of vehicles.

Avoidance of safety gears

Avoiding the use of helmets for two wheelers and seat belts for four wheelers lead to unwanted happenings.

Impatience of Pedestrians

Impatience of Pedestrians and violation of traffic rules result in accidents.

Other causes

Drunken driving, jumping red light over speeding and unmanned railway crossings cause great damage to valuable lives. Due to this, many families lose their breadwinners.

Road Safety Rules

Every country has its own road safety rules and regulations for the best interests of its citizens. India also has designed road safety rules for protecting the road users from meeting with accidents and injury.

As per the Indian law, one should be eligible to get a driving license at the age of 18. While driving use of mobile phone is prohibited. Sound horn is prohibited near a hospital or a school zone.

10 GOLDEN RULES FOR ROAD SAFETY

STOP OR SLOW DOWN

Allow Pedestrians to cross first at uncontrolled zebra crossing. They have the Right of Way (Rule 11)[1]

BUCKLE UP

So that your family and you are sate in the car (Section 138 (3)[2]. Seat Belts reduce changes of death of a car occupant in accident by over 60%.

OBEY TRAFFIC RULES AND SIGNS

To prevent road accidents (Section 119)[3].

OBEY SPEED LIMITS

For your own safety and that others (Section 112)[3]. In residential area and market places, that ideal speed is 20 kmph and the limit is 30 kmph.

KEEP VEHICLE FIT

To prevent frequent breakdowns and difficulty in controlling vehicle which may lead to accidents on road (Section 190)[2]

NEVER USE MOBILE WHILE DRIVING

To avoid distraction that lead to accidents (Section 184)[3].

WEAR HELMET

To protect your head while riding a two wheeler (Section 129)2. A good quality helmet reduces the chances of severe head injury by over 70%.

NEVER DRIVE DANGEROUSLY

To ensure your own safety and that of other road user (Section 184)[3].

BE COURTEOUS

Share the road with all and be considerate. Never range on the road. It is dangerous for your and other road users.

NEVER MIX DRINKING AND DRIVING

Be Responsible... Don't drink and Drive (Section 185)[3].

1. Rules of Road Regulations 1989 2. The Central Motor Vehicle Rules. 1989 3. The Motor Vehicle Act 1968.

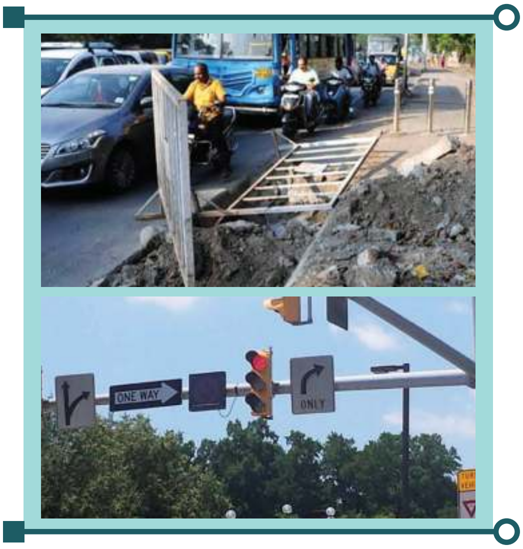
Use standard helmets while driving two wheeler vehicle and strap it before mounting the vehicle. Fasten the seat belts while driving a car for both the driver and co-passenger. Avoid carrying heavy load while riding a two wheeler. Two wheeler can carry one adult pillion rider and not the whole family. Keep a safe distance from the vehicle ahead of yours. Slow down on bends and turns, especially in hill stations. The Motor Vehicle Act, 1988 passed by the Parliament came into force in 1989 and it is applicable to across the country.

Preventive Measures

Government

Through the Ministry of Road Transport and Highways, Government of India has taken earnest steps for reducing the number of road accidents.

i) Taking steps for the rectification of accident black spots and improvement of road engineering.



ii) Ensuring the good functioning of the traffic signals and road signs at busy crossing roads.

iii) Constructing proper roads both in urban and rural areas.

iv) Installation of CCTV cameras to record high speed offences which can detect the offenders.

v) Prohibiting the act of digging or hoarding soil from roads.

vi) Remove encroachments and maintain proper pedestrian ways for ensuring road safety. If the public are violating the traffic rules, it is the duty of government to correct the public and maintain order. Stringent actions are to be taken for the violation of any road safety rules.

Individuals

One who drives a vehicle should have undergone the training and tests to obtain a driving license. It is compulsory to have the following documents – driving license, registration certificate of the vehicle, Insurance certificate, Taxation certificate, fitness certificate and permit.

Brake failure can result in crucial collisions. So the vehicle should be in good condition and serviced at regular intervals.

To avoid accidents because of potholes and road humps, users can opt to use the Raksha safe drive device. It is attached with velcro to the car and alerts the driver about road humps, bad roads and on crossing the speed limits.

Carpooling is the sharing of car journeys so that more than one person travels in car, and prevents the need for more cars to the same location.

Raksha safe drive. It is a device capable of automatic crash detection, two – way call connectivity, GPS tracking, engine health monitoring and smart panic button.

Carpooling will reduce the number of vehicles on the road. Many people use one vehicle and so fuel, money and time are saved. It will pave way for a cordial relationship and better understanding among the fellowmen.

Parents and Teachers

Parents and Teachers play a vital role in imparting road safety Education to young ones. If a child's parent violates the traffic rules, the child too will initiate the same in future. So the elders have to set an example for them in adhering to the safety rules and regulations. Video and computer games that simulate driving should be banned by the government or discouraged by parents as it will develop racing habit in children.

Help your children learn about the traffic signals and rules. Instruct them to wait for

the right signal and to use the zebra crossing while crossing the road. Warn them not to run across or along the road. Teach them to use the footpath, while walking on the road.

Provide Road Safety education since childhood. It has to be made a part of school curriculum, syllabus, text book and included in competition on road safety. Activities like writing of slogans, essays and paintings on this theme should be conducted for reinforcement.

Media

Media like radio, TV, films and advertisement could take up this responsibility of creating awareness of road safety.

On Sachin Tendulkar's 45th birthday, Mumbai police has released his video to create awareness among the motorists. "The little master set great records wearing a helmet! How about simply following his footsteps".

Traffic Signs

Traffic signs act as silent conductors of the traffic on the road. Some traffic signs are mandatory like stop, speed limit, turn right, no left turn etc. Some signs are cautionary, which warn the driver about the danger ahead like steep ascent or descent, narrow bend. Some signs are informatory providing information about hospital, petrol pump, resting place, parking or no parking area.

Road Safety Week

This is a national event which aims at promoting public awareness about traffic rules and to reduce causalities due to road accidents. It is observed annually. It is celebrated with great joy and enthusiasm. A variety of programmes related to road safety is conducted. Educational banners, safety posters, leaflets, and pocket guides related to road safety are distributed to the public.

The Government of India observes 'Road Safety Week' awareness during January, every year.

Suggestions

❖ Walking is a good alternative and cycling is a good exercise for a distance of 1 to 2 kms.

❖ Use eco-friendly vehicles.

❖ Implement the idea of installing bollards near unmanned railway crossings. A separate unhindered passage for cyclists would yield many benefits and also reducing road crashes.

❖ Cycling is a healthy habit and reduces pollution.

❖ Motorcycle manufacturers should be asked to design two wheelers with a designed maximum speed of 50 km ph.

❖ An awareness programme can be used by narrating live examples and also projecting videos.

Recap

❖ Road safety refers to the methods and measures used to prevent road users and vechicle users from fatal accidents and injuries.

❖ Violation of road rules and regulations cause road crashes and a threatening impact on a country's growth and economy.

❖ Traffic signs act as silent conductors of the traffic on the road.

❖ Mandatory signs, Cautionary signs and informatory signs are the three types of traffic signs.

❖ Every country celebrates road safety week.

❖ We should strictly follow the rules and regulations road safety and save our nation.

Glossary

1.	Pedestrians	persons walking on the road	பாதசாரிகள்
2.	Fatalities	deaths due to accident	விபத்தால் ஏற்படும் இழப்பு
5.	Breadwinner	one who earns money to support the family	குடும்பத்திற்காக சம்பாதிப்பவர்
6.	Stringent	severe	மிகவும் கடுமையான
7.	Collision	crash	மோதல்
8.	Rectification	correction	திருத்தம்
9.	Potholes	holes in a road surface	பாதையில் உள்ள குழிகள்
12.	Mandatory	compulsory	கட்டாயம்
13.	Bollards	short concrete posts used to prevent vehicles on the road	கட்டை தூண்கள்
14.	Pillion	seat behind in a two wheeler	இருசக்கர வாகன பின்இருக்கை

Evaluation

I. Choose the correct answer:

1. Road safety is meant for
   a) Passersby
   b) drivers
   c) public
   d) all who use roads

2. Road accidents affect a country's
   a) improvement   b) life
   c) finance   d) all the above

2. Permit refers to
   a) permission for driving
   b) permission for carrying goods
   c) certificate for drivers
   d) registration of vehicles

4. Raksha safe drive is a device useful for
   a) pedestrians   b) motorists
   c) car drivers   d) passengers

5. Road safety week celebration was first imitated in India in the year
   a) 1947   b) 1989
   c) 1990   d) 2019

II. Fill in the blanks:

1. The most useful invention of man for transport is ________________.
2. Using ________________ is inevitable in our journey of life.
3. Too many vehicles on the road cause ________________and________________ pollution.
4. ________________ is the monetary supporter of a family.
5. In case of emergency for medical assistance call ________________ for help.

III. Match the following:

1.	Informatory sign	Traffic lights
2.	Zebra crossing	Narrow bend sign
3.	Mandatory sign	Petrol pump sign
4.	Cautionary sign	License
5.	Right to drive a vehicle	Walkers

IV. Consider the following statements:

1. Tick the appropriate answer:

Assertion : Car pooling is the use of vehicles by turns.

Result: It saves fuel, time and money and also

a) A is correct and R is not correct
b) A is correct and R is also correct
c) A is wrong and R is correct
d) Both are wrong

2. Find the odd one

a) car   b) trucks
c) tempos   d) aero planes

3. Find the following statements are true or false

a) Road safety education in the school curriculum is an additional burden for the students.
b) An ounce of practice is worth more than tons of preaching.
c) Hoarding on roads has to be banned.
d) Following road safety rules from childhood will become a habit in future.

V. Answer in one or two sentences:

1. What are the distracters while driving?
2. Mention the 2 safety gears for safe driving.
3. Why is not safe to drive in nights?
4. When can a person obtain the right to drive a vehicle?
5. How can media promote road safety among the public?

VI. Answer the following in detail:

1. List out the documents necessary for an Indian while driving.
2. What is the need for including road safety education in the school curriculum?
3. How can parents teach their children road safety rules?

VII. HOTs

1. Knowing the road safety rules, how will you influence your parents and relatives?
2. If wheel had not been invented, what might have been our mode of transport?

Activity

1. Prepare an album of all traffic signals.
2. Organise a procession promoting road safety with catchy slogans for public awareness.
3. Conduct competitions on road safety.

ICT CORNER

ROAD SAFETY

To know and learn about the safety rules through this activity.

PROCEDURE :

Step 1: Open the Browser and type the URL (or) Scan the QR Code.

Step 2: Game page will appear on the screen.

Step 3: Click on PLAY button on the screen and Choose the Characters.

Step 4: Select the area URBAN or RURAL. Read the instructions by clicking next then start the game.

Step 5: Choose the correct path A or B to reach the goal safely

Step 1

Step 2

Step 3

ROAD SAFETY Web URL:

https://www.think.gov.uk/games/take_the_lead/take_the_lead.html

*Pictures are indicative only

ECONOMICS

Unit -1

Tax and its Importance

Learning Objectives

- ❖ To know the Taxation, Principles of Taxation and its types.
- ❖ To know the importance of Tax and its types.
- ❖ To gain knowledge of the need for Tax and People's Welfare.

இயற்றலும் ஈட்டலுங் காத்தலும் காத்த
வகுத்தலும் வல்ல தரசு.

– திருவள்ளுவர்

"It was only for the good of his subjects that he collected taxes from them, just as the Sun draws moisture from the Earth to give it back a thousand fold"

– Kalidas

Introduction

For the welfare of the society, the government has to perform various functions so it requires revenue. Modern governments have a wider variety of sources of revenue. The principal sources of the revenue are taxes, fees, prices, special assessment and Raffle Scheme. Like any other country, taxes form the most important part of revenue of India.

Taxation

Taxation is a term for when a taxing authority, usually a government, levies or imposes a tax. The term **'taxation'** applies to all types of involuntary levies, from income to capital gains to estate taxes. Though taxation can be a noun or verb, it is usually referred to as an act; the resulting revenue is usually called 'taxes'.

Taxes

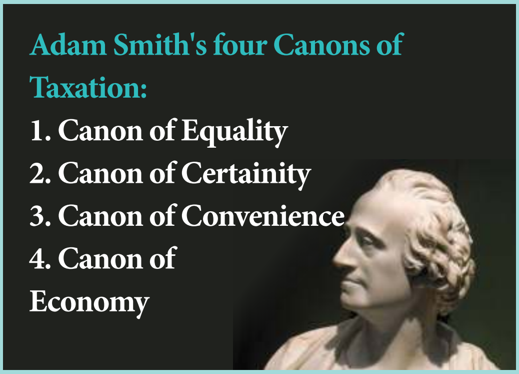
Taxes are compulsory payments to the government without expectations of direct or return or benefit to the taxpayers. According to Prof. Seligman, taxes are defined as a compulsory contribution from a person to the government to defray the expenses incurred in the common interest of all without reference to special benefits conferred.

Why are Taxes Imposed?

Everybody is obliged by law to pay taxes. Total Tax money goes to government exchequer. The government decides how are taxes to be spent and how the budget is to be organized. Tax payment is not optional. An individual has to pay tax if any income comes under the income tax slab. It is a duty of every citizen to pay taxes. More collection of tax allows the government to implement more and more welfare schemes.

Principle of taxation

Adam Smith's principles or cannons of taxation still form the basis of the tax structure of a modern state:



1. Canon of Equality: the government should impose taxes in such a way that people have to pay according to their ability. It does not mean equal amount of tax but it means that the burden of a tax must be fair and just.

2. Canon of Certainty: Certainty creates confidence in the taxpayers cost of collection of taxes and increases economic welfare because it tends to avoid all economic waste.

3. Canon of Convenience: Taxes should be levied and collected in such a manner that it provides a maximum of convenience to the taxpayers. It should always be kept in view that the taxpayers suffer the least inconvenience in payment of the tax.

4. Canon of Economy : Minimum possible money should be spent in the collection of taxes. Collected amount should be deposited in the Government treasury.

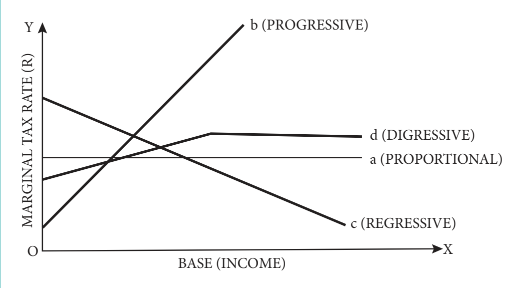
Taxation Types

There are three types of Taxation:

1. Proportional Tax

2. Progressive Tax

3. Regressive Tax and



Taxation Types

Proportional Taxation is a method, where the rate of tax is same regardless the size of the income. The tax amount realized will vary in the same proportion as that of income.

If tax rate is 5% on income and Mr. X gets an income of Rs.1,000, he will pay Rs.50, Mr. B gets an income Rs.5,000, he will pay tax of Rs.250. In short, proportional tax leaves the relative financial status of taxed persons unchanged.

Progressive Taxation is a method by which the rate of tax will also increase with the increase of income of the person. If a person with Rs.1000 income per annum pays a tax of 10% (i.e) Rs.100, a person with an income of Rs.10,000 per annum pays a tax of 25% (i.e) Rs.2,500 and a person with income of 1 lakh per annum pays the tax of 50% that is Rs.50,000.

Regressive Taxation

A regressive tax is a tax applied uniformly, taking a larger percentage of income from low income earners than from high income earners. It is in opposition to a progressive tax.

Importance of Tax

Without taxes, governments would be unable to meet the demands of their societies. Taxes are crucial because governments collect this money and use it to finance under the following social projects.

1. Health

Without taxes, government contributions to the health sector would be impossible. Taxes go to funding health services such as social healthcare, medical research, social security, etc.

Health

2. Education

Education could be one of the most deserving recipients of tax money. Governments put a lot of importance in the development of human capital and education is central in this development.

Education

3. Governance

Governance is a crucial component in the smooth running of country affairs. Poor governance would have far reaching ramifications on the entire country with a heavy toll on its economic growth. Good governance ensures that the money collected is utilized in a manner that benefits citizens of the country.

Digital India

4. Other important sectors are infrastructure development, transport, housing, etc.

Apart from social projects, governments also use money collected from taxes to fund sectors that are crucial for the wellbeing of their citizens such as security, scientific research, environmental protection, etc.

Some of the money is also channeled to fund projects such as pensions, unemployment benefits, childcare, etc. Taxes can affect the state of economic growth of a country. Taxes generally

contribute to the gross domestic product (GDP) of a country.

Scientific Research

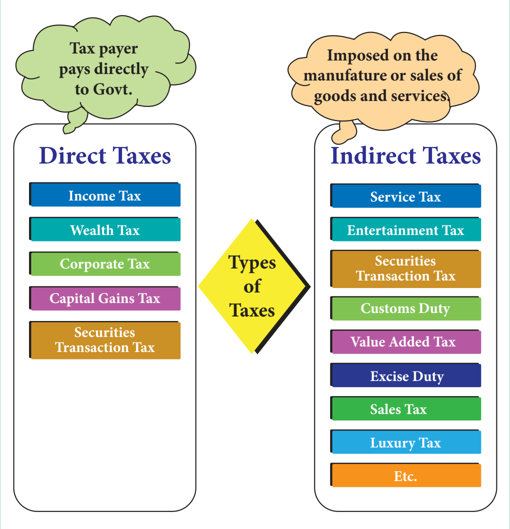
Environmental Protection

Types of tax

In modern times taxes are classified into two types. There are:

1. Direct Tax;

2. Indirect Tax



Direct Tax

A **Direct tax** is paid directly by an individual or organisation to imposing entity.

A tax payer, for example, pays direct taxes to the Government for different purposes, including real property tax, personal property tax, income tax or taxes or on asserts.

Income Tax

Central Board of Revenue bifurcated and a separate Board for Direct Taxes known as Central Board of Direct Taxes (CBDT) constituted under the Central Board of Revenue Act, 1963.

Other examples of direct tax are

Corporation Tax

Corporation Tax

It is levied on profit of corporations and companies. It is charged on royalties, interest, gains from sale of capital assets located in India, fees for technical services and dividends.

Wealth Tax

It is imposed on property of individuals depending upon the value of property. The same property will be taxed every year on its current market value.

Gift Tax

It is paid to the Government by the recipient of gift depending on value of gift.

Estate Duty

Estate Duty

It is charged from successor of inherited property. It is not desirable to avoid payment of taxes .They are levied directly on income and property of persons, who pay directly to the government.

Indirect Tax

On the other hand when liability to pay a tax is on one person and the burden of that tax shifts on some other person, this type of tax is called an indirect tax. Indirect Tax is a tax whose burden can be shifted to others. For example.

Service Tax

It is raised on provision of Service. This tax is collected from the service recipients and paid to the Central Government.

Sales Tax

It is an indirect tax on sale of goods because liability to collect tax is that of shopkeeper but the burden of that tax falls on the customer. The shopkeeper realizes the tax amount from the customer by including it in the price of the commodity that he sells.

Excise Duty

It is paid by the producer of goods, who recovers it from wholesalers and retailers. This tax in India is levied by the Central Government.

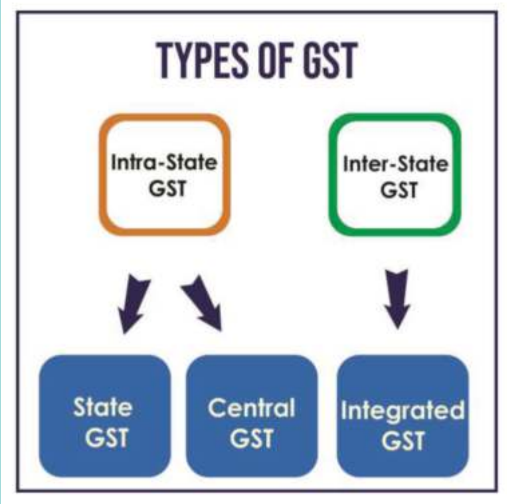
Entertainment Tax

The state governments charge such tax on every transaction related to entertainment.

Some examples are movie tickets, video game arcades, stage shows, exhibitions, amusement parks, and sports-related activities.

Goods and Services Tax (GST)

Goods and Services Tax is a kinds of tax imposed on sale, manufacturing and usage of goods and services. This tax is applied on services and goods at a national level with a purpose of achieving overall economic growth. GST is particularly designed to replace the indirect taxes imposed on goods and services by the Central and State.



Introduction to GST

Previous Indirect Tax Structure and its difficulties

The history of Indian taxation goes back to ancient period. According to Arthshastra, the book written by Kautilya, in ancient time taxes were levied and collected in both cash and kind. The modern history of Indirect taxes starts from the early 20th century when Central Excise Duty was imposed on Salt, Sugar, Motor Spirit, etc. Gradually the base of Excise duties was widened. At the time of independence, the system of Central Excise Duty at the national level and the Sales Tax at the State level was prevailing. After prolonged efforts and amendments, VAT was introduced first in Indian State of Haryana in 2003 and thereafter in 24 States/UTs including Punjab, Chandigarh, HP, J&K and Delhi in 2005. If the VAT was a major improvement over the pre-existing Sales Tax regime , then the Goods and Services Tax (GST) is indeed an remarkable improvement and the next logical step towards realising perfection in taxation system in the country.

Initially, it was proposed that there would be a single and national level GST. However, the GST tax regime has been finally implemented from 1st July, 2017 across India. With thus there is a economic union of the country with ONE TAX, ONE MARKET AND ONE NATION.

Goods and Services Tax (GST) is a tax on all the goods and services that we buy. It has two parts, the Central Goods and Services Tax (CGST) and State Goods and Services Tax (SGST). It is a transparent tax. If you get a bill for the products you buy, you will find the following information:

Value of the Product	=	Rs.100	SGST 9%	=	Rs.9
CGST 9 %	=	Rs.9	Total	=	Rs.118

In the bill, the GST is 18%, and it is divided equally as 9% for the Central and State Governments. Therefore, Rs 9 will go to Tamil Nadu Government and another Rs 9 will go to Central government.

If a seller in Tamil Nadu sells a commodity to a buyer in other state (for example Karnataka), it is called inter-state trade. In the case of inter-state trade, the bill will be as given below:

Value of the Product	=	Rs.100
IGST 18 %	=	Rs.18
Total	=	Rs.118

Rs 18 will go to Central government. Central government will take Rs 9 and send another Rs 9 to Karnataka government.

The tax is divided into five slabs - 0 per cent, 5 per cent, 12 per cent, 18 per cent, and 28 per cent. Although GST is collected by the central government, taxes on petroleum products, alcoholic drinks, electricity are separately collected by the state government and almost all the necessities of life like vegetables and food grains are exempted from this tax.

Toll Tax & Road Tax

Toll tax is a tax you often pay to use any form of infrastructure developed by the government, example roads and bridges. The tax amount levied is rather negligible which is used for maintenance and basic upkeep of a particular project.

Swachh Bharat Cess

This is a cess imposed by the government of India and was started from 15 November 2015. This tax is applicable on all taxable services and the cess currently stands at 0.5%. Swachh Bharat cess is levied over and above the 14% service tax that is prevalent in the present times.

Distinction between Direct and Indirect tax

Direct Tax	Indirect Tax
Burden cannot be shifted by taxpayers	Easily be shifted to another person
Tax is imposed on personal income and corporate income	Taxes imposed on various goods and services
Direct tax has no inflation pressure	This tax has inflation pressure
The impact and incidence are the same in case of direct tax	The impact and incidence are different in case of indirect tax
Direct tax is less elastic	Indirect tax is more elastic

Need for Tax and Peoples Welfare

The levying of taxes aims to raise revenue to fund governing. It helps alter prices in order to balance the affect of demand. States and their functional equivalents throughout history have used money provided by taxation to carry out many functions.

Some of these include expenditures on economic infrastructure like, transportation, sanitation, public safety, education, health-care systems, military, scientific research, culture and the arts, public works, public insurance, etc. A government's ability to raise taxes is called its fiscal capacity.

When expenditures exceed tax revenue, a government accumulates debt. A portion of taxes may be used to serve past debts. Governments also use taxes to fund welfare and public services. These services can include education systems, pensions for the elderly, unemployment benefits, and public transportation. Energy, water and waste management systems are also common public utilities.

According to the proponents of the list theory of money creation, taxes are not needed for government revenue, as long as the government in question is able to issue flat money. The purpose of taxation is to maintain the stability of the currency, express public policy regarding the distribution of wealth, subsidizing certain industries or population groups or isolating the costs of certain benefits, such as highways or social security.

Summary

- ❖ Taxation is a term used for when a government taxing authority levies or imposes a tax. The term 'taxation' applies to all types of involuntary levies, from income to capital gains to estate taxes.
- ❖ Taxes are compulsory payments to the government without expectations of direct or return or benefit to the taxpayers.
- ❖ Proportional Taxation is a method, where the rate of tax is same regardless size of the income.
- ❖ Governance is a crucial component in the smooth running of country affairs.
- ❖ A Direct tax is the tax whose burden is directly borne by the person on whom it is imposed, i.e., its burden cannot be shifted to others.
- ❖ Estate is charged from successor of inherited property. It is not desirable to avoid payment of taxes .
- ❖ Indirect Tax is a tax whose burden can be shifted to others.
- ❖ Excise duty in India is levied by the Central Government.
- ❖ Goods and Services Tax is a kinds of tax imposed on sale, manufacturing and usage of goods and services.
- ❖ The levying of taxes aims to raise revenue to fund governing or to alter prices in order to affect demand. States and their functional equivalents throughout history have used money provided by taxation to carry out many functions.

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Glossary

1.	Equality	equal opportunities	சமத்துவம்
2.	Convenience	the state of being able to proceed with something without difficulty	வசதி
3.	Proportional	equivalent	விகிதாசார
4.	Regressive	taking a proportionally greater amount from those on lower incomes	பிற்போக்கு வரி
5.	Inherited	received as an heir at the death of the previous holder	மரபுரிமை
6.	Accumulate	gather	குவிக்க
7.	Subsidize	contribute to	மானியம்
8.	Persecution	unfair treatment of a person or a group, especially because of their religious or political beliefs	துன்புறுத்தல், அடக்குமுறை

Evaluation

I. Choose the correct answer:

1. Taxes are_________________ payment.
   a) Voluntary
   b) Compulsory
   c) a & b
   d) None of the above

2. Minimum possible amount should be spent in the collection of taxes is
   a) canon of equality
   b) canon of certainity
   c) canon of economy
   d) canon of convenience

3. This taxation is a very opposite of progressive taxation.
   a) degressive b) proportional
   c) regressive d) none

4. Income tax is a
   a) direct tax b) indirect tax
   c) a & b d) degressive tax

5. Which tax is raised on provision of service.
   a) wealth b) corporate
   c) wealth d) service

II. Fill in the blanks:

1. _________________is a term for when a taxing authority usually a government levies or imposes a tax.
2. _________________is the method, where the rate of tax is same regardless size of the income.
3. _________________is paid to the Government by the recipient of gift depending on value of gift.
4. _________________tax burden cannot be shifted by tax payers.
5. Indirect tax is_________________ elastic.

III. Match the following:

1. Principle of taxation	–	Direct Tax
2. Estate tax	–	Goods and Service Tax
3. Excise Tax	–	Adam Smith
4. 01.07.2017	–	Less elastic
5. Direct Tax	–	Indirect Tax

IV. Odd one out:

1. Which one of the following is not a indirect tax?
2. a) Service tax b) Value Added Tax (VAT)
   c) Estate duty d) Excise duty

V. Correct one out :

1. Which one of the following tax is a direct tax?
   a) Service tax b) Wealth tax
   c) Sales tax d) Progressive tax

VI. Give short answer:

1. Define tax.
2. Why taxes are imposed?.
3. Write name of taxation types and draw its diagram.
4. Write any three importance of tax.
5. What are the types of tax? and explain its.
6. Write short note on Gift Tax and Service Tax.
7. What is Goods and Service Tax?.
8. Distinguish between the direct and indirect tax.

VII. Give brief answer:

1. Write briefly about the principles of taxation.
2. Explain the taxation types.
3. Explain the importance of tax.
4. Explain the direct and indirect tax with examples.
5. Why need for tax on people welfare? And explain it.

VIII. Activity and Project

1. Students are asked to go to the nearest departmental store and know about the Goods and Service tax (GST). Teacher and students are discussed about the GST.
2. Teacher asks the student to write an essay on what is tax? why we pay tax? And how does the Government use this tax for the welfare of the people.

IX. Life Skills :

1. Teacher and Students together discuss about the tax and their importance of development of country.

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